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EDITORIALS.

THE MASKED SYMPTOMS.

THE Health Commissioner of the metropolis, Dr. S. S. Goldwater, received a letter from "the president of a large manufacturing corporation, well known for its business efficiency and progressiveness," and which disclosed "an intelligent appreciation of the possible usefulness of the periodic physical examination of large groups of employees." This prescient president learned of three cases of tuberculosis among his 130 employees, which fact has led him to consider the question of requiring a physical examination of all his employees, an examination adequate to determine the general state of health of each, to protect those who are well against the risk of contagion to which they should not be exposed, and to guide him in helping those employees who are not in good health and who may require aid. With this humane object in view he wrote asking the Commissioner if there is any provision making for such inspections, either by the City or the State authorities, and, if so, how he might engage for them. He was answered that the Health Department of the City of New York is without funds for such work; but it "strongly urges employers, whenever possible, to institute such examinations for the benefit of their employees and with the latter's consent."

It is entirely possible for such examinations to be instituted. And when this wise president finds the way, as he certainly will, it will be shown him that at least twenty-five per cent. of his employees are sick men—that is if they are average workmen. And as everyone who is wise and humane is sure to benefit by these fine qualities, this president will by such examinations find the service rendered him by his employees enormously increased in economic ways.

In this relation we emphasize the work of the Life Extension Institute in New York City, which we considered in the number of THE GAZETTE of May last. This Institute is chiefly philanthropic, for although a very moderate fee is charged the income is chiefly expended for improving its service and extending it, so far as possible to all civilization. Its board of directors is made up of men whose lives have been dedicated to public welfare and others noted for business capacity of the highest order. Ex-President Taft stands at its head. General Gorgas is its Chief Sanitary Adviser. Professor Irving Fisher of Yale heads its Hygiene Reference Board. Such gentlemen as these serve without compensation in the "work of human salvage."

Efficiency is the business slogan of the twentieth century thus far—an inspiring slogan; none better, except one, as we shall see.

And yet ideal efficiency is not going to come anywhere near realization if we do not understand that the human machine cannot be really efficient if its various parts

(its organs and tissues) are not sound, well adjusted to one another, properly fuelled (with wholesome meat and drink), not strained beyond its factors of safety, and running smoothly.

In fact any kind of efficiency that does not call for human health, will never be anything but a spurious efficiency, economically disastrous.

So the efficiency slogan, to be effective, has got to be a kind of sub-title to the Life Conservation slogan, the greatest idea which twentieth century medicine has thus far evolved.

It is worse than useless, it is criminal ignorance, to expect ideal human efficiency in the face of such facts as the following:

Every third or fourth among us had been dying, between fifteen and forty-five, life's economically most productive years, of tuberculosis. There are trades—stone-cutting, for example—in which eighty-five per cent. of the workers between twenty-five and thirty-four die of consumption.

There are hundreds of dangerous trades conducive to consumption. Volumes could be written—whole libraries, indeed, have been written—on this phase alone of the subject of economic inefficiency, I can only indicate here the waste—almost too great to be grasped by the mind—resulting from our sufferance of this entirely preventable disease.

One among eight of our women dies most cruelly of cancer, after dreadful sufferings through many months, several years; many such unhappy women have kept working until this physical impairment has made them give up their tasks. Apart from the human anguish here connoted, what an economic loss is this.

Of twenty thousand people who applied for life insurance, imagining themselves in sufficiently good health to get policies, forty-three per cent. were found to have some kind of heart or kidney or artery ailment; and were either turned down absolutely or were assessed higher premiums than ordinarily.

Six hundred and fifty thousand working people—and who among us is not a worker—die annually when they have no business dying, die long before their time, of preventable diseases.

Medical annals teem with such depressing facts.

THE CONSERVATION OF VISION.

Among the many things in modern civilization that tend to impair the human vision is improper illumination, natural or artificial.

Poor lighting is bad; at least equally bad is too intense light. Dr. Ellice M. Alger, of New York, reminds us that the human eye is but an expanded portion of the brain; also that vision is an exceptionally tender and complicated function. Any organ exercised well within its limits tends to increase in power and facility, whilst if overworked it becomes less and less fit for any work at all. A man habitually using his eyes in strong light decomposes his "visual purple" faster than it can be regenerated. Even normal, healthy eyes are strained by overuse especially under unfavorable conditions and in lowered health; and as most eyes are abnormal, or at least not normal, the individual has to cope with not only a bad environment and lowered health, but also his inherent optical defects. With the many modern methods of commercial lighting by gas and electricity the composition of light as well as of its intensity has become important for the ophthalmologist to consider. In the days of oil and candle light the question was simply one of quantity, the quality being generally soft and benignant. But modern lighting, whether of gas or electric is often so intense as to be extremely fatiguing, and worse; these means of illumination also contain many more of the violet and ultra violet rays of the spectrum, which are useful in light

therapy and in radiography, but are certainly amiss for illuminating the printed page or the object upon which the artisan must work. Lights that are sufficient to tan and "sunburn" the skin, and perhaps to induce baldness, are no doubt responsible for much of the present day asthenopia. Nor can one doubt the pernicious effect of such illumination on the deeper optical structures; how much cataract results from this cause, who can say? Certain it is that stokers, glassblowers and the like, who are continually exposed to very intense light and heat have an enormously increased liability to cataract. Illumination made up of the red and yellow rays of the spectrum is the best for visual purposes; and the problem of securing a light which shall allow the maximum of efficiency, comfort and convenience is one for the illuminating engineer rather than the physician. The solution of this problem were not only a humane procedure and one most conducive to comfort, but one also very profitable alike to inventor, to employer and to employee, and all those who read—that is, to everybody.

The importance of the matter is increased by the consideration that eyes are not merely optical adjuncts but are integral parts of the body. They affect mutually the functioning of most other organs. Inefficient eyes cause most chronic headaches, much depression and fatigue, many indigestions, most of the aberrations of genius and of *les demifous* (the half-witted) and not a little marital infelicity.

WHY RAILWAYS WON'T EMPLOY INTEMPERATE MEN.

RAILWAY directors are now requiring their employees either to use alcohol and tobacco very moderately or to abstain altogether from their use. There is a reason.

Intemperate railway employees have been found not to be able to recognize red and green, which are the two colors most exclusively used in operating trains. So treacherous and unsuspected is this defect of vision that only an accident, with loss of life to innocent people, might reveal to the engineer that he is unable to recognize the signals.

Of course there are plenty of other good reasons for not wanting tippling workmen on trains; but this visual defect is certainly enough to discourage their employment. Those who are every day responsible for the lives of thousands of passengers would themselves be criminal if they were to take the risk of engaging such men.

This trouble, which doctors call "toxic amblyopia" is more common among regular imbibers—the "chronic soaks" than among occasional drinkers. It varies in degree from a slight dimness of vision through the inability to recognize colors to blindness.

It is perfectly true that people get "blind drunk" from even a single spree; and sometimes the blindness is permanent, especially when there is wood alcohol or fusel oil in the whiskey—the kind of stuff you put on old doors to scrape off the paint with.

Nor is alcohol always the only thing at fault. Inveterate smokers have precisely the same affection of vision. Red and green appear to them as different shades of grey. And in time some of them (and not a few, sad to say) go hopelessly blind.

It has been found that among 138 people (mostly men of course), who have this deplorable defect of vision, 64 were hard drinkers, 45 used both alcohol and tobacco to excess, and 23 were inveterate smokers. This accounts, as you observe, for all but six of the 138 "visual defects."

Carlyle has drawn attention to the fact that in the Germanic languages, the words "healthy" and "holy" were originally identical.

"The man who has solved the problem of how to make the most of time has found the way to make the most of himself."—*Walter H. Cottingham.*

STIMULANTS.

COFFEE and tea are generally consumed merely for the pleasure which the warm drink gives, states Prof. H. E. Ogden in his book on *Rural Hygiene* (The Macmillan Co.). Yet both these beverages have a certain stimulating effect on the nervous system.

When a tired woman refuses food and drinks instead cup after cup of strong tea she is cheered and exhilarated for the time being; but this is only at the expense of nerves and muscles, which must sooner or later break down if the habit of "tea-tippling" is persisted in to the exclusion of food.

Similarly, when a man under stress of business or depression drinks strong black coffee to keep up, he must pay the penalty for the stimulant some way or another, somehow or another.

The natural forces of the human body are able to do normally a certain amount of work; and their ability to perform this work is directly in proportion to the energy derived from the food-supply taken into the body.

A machine is kept going by the fuel in the engine; the machine may be made to go faster by means of bellows. Coal is the fuel, the bellows stimulate the flame.

In the human machine food (meat and vegetables) are the fuel; tea, coffee, alcohol are as the bellows—they are not the fuel.

No amount of tea, coffee or alcohol will add to the living tissue (the nerves and muscles and organs) of the body; these stimulants merely goad the nerves and muscles to further action, however tired and unwilling they may be.

When the stimulant is stopped, or after a time in spite of the stimulant, the exhausted nerves and muscles refuse to continue their work, and the weakened body rebels, stops work and may even die.

A certain amount of stimulants at rare intervals, when there is unusual stress, or for particular occasions may do no harm. At such times we may consider the stimulants the savings banks of the tissues.

But the pity of it is that if the habit is once started the ultimate bad effects are forgotten in the apparent relief of the moment.

Besides the baneful stimulative effect of tea, a substance known as tannin is developed in the brewing, and this tannin is really harmful on account of its strong astringent property, which tends to injure the delicate membrane of the stomach. Sometimes tired housewives, without knowing it, are really drinking ink. Ink is a liquid composed of iron and tannin dissolved in water.

The tea may be brewed in an iron kettle and left standing "to take a drop" of, from time to time. Such tea left standing is sure to be strong in tannin, and the iron from the kettle makes the ink.

The bitter taste of the tannin is disguised when milk is used with the tea; tea without milk or cream may be safer than tea with milk, because without the milk the bitter taste would prevent the tea being boiled so long.

The fact is that in the faculty of judgment and of reaching righteous conclusions on questions relating to the ordinary affairs of life high intelligence and superior education play no essential part. Knowledge and wisdom are far from synonymous terms; and many there are that have got themselves a vast amount of knowledge who have yet, with all their getting, never been able to understand their fellows, or humankind's ways, needs and sympathies. Any experienced lawyer knows that a jury taken from the streets and from shops is as likely to render a just verdict as is a jury of intellectuals, if not more so. *Vox populi, vox Dei* is an extremely well thought out proposition.

GET RID OF A COLD.

It is a serious mistake to think the common cold is a trifle. It leads to many grave diseases, especially to pneumonia and consumption. Who in his senses would say these are trifles.

How shall we avoid taking cold? To begin with lead the physiological life. Get up in good time; bathe well; eat three meals of wholesome food a day, and don't hurry about it. Be in the fresh air all the time, day and night; and get in the sunshine whenever you can, and it isn't too hot. Be very moderate in the use of alcohol and tobacco; better by far have nothing to do with them whatever. Better not smoke until you are twenty-one; and then maybe you won't care to.

Tea, the tipple of women, should be taken always freshly made, and in moderation.

Avoid dusty, damp or foul air; work only in rooms well-ventilated. Go to bed early and sleep at least eight hours. Wear suitable underclothes all the year around—thick in the winter, thin in the summer. The night wear must of course be changed from that of the day. Wear woolen socks in bed if the feet are cold.

Wear always warm footwear and stout, watertight shoes. Never get your feet wet. Many women won't wear rubbers or "arctics"; but all women should; and then they won't so often be going to doctors about pains in the back. "Put your chest protector on your feet." Cover your chest well, of course, but not enough to impede breathing, upon which good health depends.

Sleep with the windows open. However, avoid draughts; this can be done by means of screens or a clothes horse with a blanket over it.

Workers out of doors can digest coarser food than clerks; so the latter have to take exercise in the open air as much as possible. Pure air means the greatest possible amount of oxygen; and this means pure blood; and pure blood means a strong, virile constitution, capable of withstanding colds.

Both overeating and eating too much sugar and starches are habits tending to colds. A great many little children are constantly having colds in their noses; this is oftentimes not because they don't get enough to eat; but because they eat things not fit for children to eat.

Colds are catching; every now and then the papers tell of epidemics of colds. Then look out for the man who talks thick, and who is constantly sneezing, blowing his nose and making a general nuisance of himself. Sore throats should be treated until they are cured. Adenoids and inflamed tonsils are a fruitful soil for the catarrh germs; in children especially they ought to be removed.

Always breathe through the nose; there are some people who think the mouth is made for breathing, but they are misguided. The inside of the nose has spaces where the air is warmed before it is breathed into the lungs.

Never eat without having first washed the hands, and getting rid of possible influenza or pneumonia germs.

If you are afraid a cold is coming on douche your nose by means of a "nose cup" to be got in a drug store; and then gargle your mouth with the same solution—a half-teaspoonful common table salt to a tumblerful water, as hot as can be borne without scalding the nose and mouth.

The American Association for Labor Legislation, which did much in the successful campaign for accident compensation, is now waging a war on industrial sickness; and this association would have sickness insurance made compulsory, with emphasis on medical care in order that it shall lead to a campaign of health conservation similar to the "safety first" movement resulting from accident compensation.

HUMAN JUNK SHOPS.

It appears that when anybody or anybody's baby living in and around Memphis, Tenn., swallows things they have no business swallowing, Dr. W. L. Simpson of that town is appealed to; since he is especially handy with the X-rays (by which foreign bodies are located in one's "innards"), the bronchoscope (by which such bodies in the windpipe and breathing tubes are reached), and the esophagoscope (by which such bodies in the gullet are extracted). Dr. Simpson has, in consequence, accumulated quite a collection, for example:

A beer check which a boy of three years tried to swallow. When he gets older he will know better. Generally speaking adults would rather swallow the beer than the check. An X-ray examination showed the check lodged, at the level of the collar bone. Dr. Simpson, with his little esophagoscope, extracted this which, our prohibitionist friends will learn with regret, was unimpaired as to the purpose it was intended for. After it was extracted it was still good for one drink. The child had no further trouble—not up to the latest advices.

Harold L., aged seven months, thus early evinced a most deplorable propensity, in having tried to swallow a Brown Mule tobacco tag. Under chloroform Dr. Simpson removed the tag. Let us hope this will be a lesson to Harold never again to have anything to do with tobacco.

(By the way, those youngsters in and around Memphis seem a pretty precocious lot.)

Baby Sledge, five years, swallowed a pin after which indiscretion he was unable to swallow food. "He acted as if he felt sick." But Dr. Simpson took that same esophagoscope in hand, with the usual brilliant result. Next day baby's swallowing apparatus was in its usual fine working order, with good digestion waiting on appetite, in the most comfortable way. Space prevents our detailing more on Dr. Simpson's interesting cases.

THE INDOOR-OUTDOOR BED.

About one-third of The Indoor-Outdoor Bed is concealed indoors under the seat of a davenport; and the rest is in an alcove-like addition extending outside some two and one-half feet. The dome-shaped wall of the alcove revolves; and by simply swinging it over to the inside, the occupant finds himself out in the open, protected by a heavy wire screen and adjustable storm curtain. By reversing the operation the bed is inside a warm room and the patient is free to get up without the fear of being chilled. And he has the night before undressed in the comfort of his room and has then been able without exertion to sleep out in the open.

And in the event of an acute fever for which cold air is prescribed such as pneumonia, consideration is here had for the nurse, who need not thus be, for many hours attending her patient in the cold air, and can make all the changes in the bedding in the warm room, returning the patient at once to the cold air. And in the hot nights so depressing to the invalid, the indoor heat may be shut away; whilst by day the heat of outdoors can be avoided.

The steamer rolled and pitched in the mountainous waves, and Algy was very seasick. "Deah boy," he groaned, "promise me you will send my remains to my people." An hour passed. "Deah boy," feebly moaned Algy, "you needn't bother about sending my remains home—there won't be any."—*Buffalo Commercial.*

ORIGINAL ARTICLES.

THE HYGIENE OF INFANCY AND CHILDHOOD.

By Sidney V. Haas, M.D., President Lebanon Hospital, Etc., Etc.

A Lecture Given Under the Auspices of the Social Service Department of the Lebanon Hospital, New York.

The subject to be discussed this evening is "The Hygiene of Infancy and Childhood."

Hygiene is that department of medical science and art which has to do with the preservation of health and the prevention of disease.

The hygiene of the infant should really begin before he is born. The offspring of unhealthy parents are likely to be weak. The children of very young, or very old parents are apt to be of poor type.

There is one disease, syphilis, which has a special importance at this stage. It is so readily transmitted to the infant by a parent who, owing to the absence of symptoms, imagines himself cured of the disease, and because the treatment of the mother by the administration of potassium iodide can insure the birth of a healthy child, who otherwise might bear the burden of the disease for life, which in severe cases is usually short.

At the time of birth, another venereal disease, gonorrhœa, assumes appalling importance, not because it is transmitted to the infant, to perhaps present manifestations later; but because in the very act of birth the eyes may become infected and blindness ensue. Fifty per cent. of all the blindness in the world is due to this infection, at this time. This can be absolutely prevented by instilling a few drops of a 2 per cent. solution of nitrate of silver into each eye, once, immediately after the baby is born. Many communities have made a law penalizing the physician or midwife who neglects this measure; disregarding the fact that neither parent may ever have had the disease.

FOOD.

There is only one perfect food for the new born human infant, breast milk. Other foods may make a baby gain in weight and grow; but they lack certain ingredients, impalpable in the present state of our knowledge, which have to do with resistance to disease. Many more breast fed babies survive than those artificially fed.

If breast milk cannot be obtained then a mixture of cow's milk is to be used; and other things only if cow's milk cannot be made to agree.

The milk should be of the kind called certified, which is milk produced in the cleanest possible way, from cows who are entirely healthy. If this is not available, or too costly then milk should be pasteurized, that is, heated to 157 degrees for 30 minutes. The sterilization of bottles and nipples by boiling must be practised. If these facts are borne in mind, then there can be no gastro-intestinal infection in the infant, although an indigestion may occur from inability to assimilate properly, milk mixtures.

Scurvy is a painful, sometimes serious condition, produced in children after the sixth month, by withholding fresh fruits or vegetables. It can never occur where fresh foods are given.

The intervals between feedings, the kind of food, all are important.

Not all individuals have the power to digest and assimilate in the same degree.

Thus milk, although perfect food for many, acts as a poison to some.

In the same way eggs are a distinct poison in some cases. These peculiar effects are due to certain constituents of the food usually the fat; but sugars, starches or proteids may cause the trouble.

This is important to bear in mind since it is the general belief that milk and eggs (taking them as examples of perfect food) should agree with all children.

After the sixth month it is wise to offer solid food first in the form of strained gruel, or crust of bread; later, vegetables, fruit and meat juice.

After one year an attempt should be made to feed food in a coarse state, thus: finely chopped meat in place of meat juice, gruel not strained, though always well cooked and thinned out with milk or water, crusts, fruits, etc.

The reason for this is twofold. First, fluid food does not give the jaws and teeth work to do, therefore, they develop badly. Second, milk given in very large quantities removes the appetite for other foods, and since milk is very low in iron content, an anæmia is very apt to follow the prolonged exclusive use of milk, especially in later infancy, and childhood.

Sugars in excess in some children may produce a tendency to eczema, and catarrhal conditions, as seen in adenoids, enlarged tonsils, frequent head colds, recurring bronchitis and even asthma.

Fats are capable of doing the same thing, and besides produce drowsy or convulsive states which are spoken of as acid poisoning.

Starches in excess may produce a peculiar state in which the children lack appetite, are peevish, pale, and fail to progress. The starches presented in the form of white or wheat bread, and potatoes are apt to induce constipation. They are low in mineral content and for this reason coarse breads, rye, whole wheat, etc., should be used in place of white bread; and potatoes should be used only in moderate amount.

Proteids or the meat element of foods are less apt to give trouble than any of the foregoing; but excess of meat may also produce irritability and other symptoms.

Stimulants—alcohol, coffee and tea—should not be used. The latter may be of value at times when used in very small quantities as a flavoring for milk.

Clear broths may properly be referred to as stimulants, and are of value in sickness. In health, only when they contain vegetables, cereals or other things, have they sufficient food value to warrant their use.

A desirable diet in childhood should be varied, and, except for special reasons, should contain milk or cocoa, cereals, meat or eggs, vegetables, fruits, thick soups, coarse breads and butter. The bowels should be moved at least once daily.

CLOTHING.

The question of clothing the infant should create no difficulties. As a matter of fact one of the greatest causes of discomfort to the infant lies here.

What is the correct dress for infants? The answer is, dress which will keep them comfortably warm in cold weather, and cool as possible in warm weather.

In the winter a warm undershirt with long sleeves next to the skin, diapers, woollen stockings, a flannel slip, and outside of this a muslin slip, for the house, with the addition of a knitted sweater, warm coat and bonnet for the open air. When the weather is exceedingly cold, heavier outer wraps; when milder weather prevails, lighter ones,

In the summer, if the weather is hot, diapers, and a muslin slip are proper dress. It is impossible to dress a child too lightly on a hot day.

The abdominal band, without which babies are supposed to suffer from intestinal trouble. After the navel has healed it is no longer required.

When should shoes be first worn? Excepting the woollen bootees which are used for warmth, it is wise to omit shoes until the baby walks. He will surely walk weeks sooner if his naked feet can feel the ground while he is learning. As soon as possible it is well to use shoes with heels. The clothing of older children must not cramp them. No tight bands around the neck or waist, no straps to pull them into faulty posture. The same general rule applies here as in younger children; and the amount and character of the clothing to the condition of the weather. The weight of underwear and outer clothing may be changed from day to day, with change of weather and such change may even be desirable in the course of a single day.

EXERCISE.

In early infancy exercise is obtained by crying, twisting, turning, and in the course of feeding and manipulation; as soon as possible, usually about the eighth week, it is wise to allow the baby to lie naked for one-quarter of an hour daily so that, untrammelled, he may exercise his limbs so far as he is able.

Later, when an attempt is made to sit up, it should be encouraged, and the same hold true if he attempts later to stand and walk.

The back and limbs are strong enough when they can accomplish these feats.

BATHING.

A child should be bathed daily in water at temperature of the body. The time is to be convenient to the mother, and if in early infancy this bath is followed by pouring over the head, chest and back, water a few degrees colder, then the bath, and the temperature of this water lowered every few days, before the baby is many months old it will be found that he enjoys water as cold as it runs from the faucet, after the tepid bath. The bath should be kept up through childhood, until it becomes a fixed habit.

Sleep plays a most important part in infancy, when a child is normally awake, only to eat or to be made comfortable. As the months go by, there is a somewhat longer waking period. It is well to try to maintain the habit of sleeping in the daytime through the early years of childhood.

The causes of disturbed sleep are hunger, overfeeding, improper feeding, keeping the infant too warmly or too lightly covered, too much excitement just before bedtime.

The proper dress for the night after the first month or two is a single long gown, muslin in hot weather, knitted, canton flannel or flannel in cold weather. Underwear is undesirable.

AIR AND LIGHT.

are no less important to the infant, and young child than to the young plant.

There is no such thing as giving a child too much of them.

This does not mean that a child should be out when the mercury is below zero, or when the wind is blowing a gale. On the contrary, in the city at least, with its dust-laden, infected streets, a very distinct contra-indication to the open, is a dusty, windy day, with its tendency to produce infection. But cold and snow and rain are no reasons for depriving the children of the open air. In the house the windows should always be open when possible, the children being always properly clad. A cold is not produced by open windows; very much more likely are they to occur if windows are kept closed. Draughts should be, and are easily avoided.

Light, daylight and sunlight are not at all appreciated and yet it is possible for the trained observer to make a diagnosis of insufficient exposure to light, by most characteristic symptoms—head nodding, nystagmus or oscillation of the eyeballs, and pallor.

For example, if a child sleeps either in the house or in the street, the blinds should house or in the street, the blinds should be be raised in the former, the hood of the carriage should be drawn as far as possible in the latter instance to admit the maximum of light.

This does not mean that it is well to allow the blinding sunlight to fall into a child's eyes; it is only necessary to turn the head of the infant toward the source of light to prevent this.

MENTAL HYGIENE.

The mental hygiene of the child does not always receive the attention it deserves. Diversion is almost as necessary as food to the full development of children. Children are constantly harassed by guardians who, in their watchfulness, interfere with many entirely harmless and normal activities on the part of children.

A safe rule to follow is not to interfere with children so long as they do nothing that endangers either themselves or objects and persons around them. In this way they will develop best.

Remember that children (young children) rarely lie. The lies they seem to tell are the

products of their imagination, and often represent dream experiences which they are unable to differentiate from the real. All children are fearful and to punish them because they are unable to overcome a fear is a grave error; help them to understand, and appreciate and protect them from repetition of their fearsome experience and it will finally fade away. If this is not done, it may grow and finally become a fixed idea.

Temper in the child is always the expression of rebellion against that which it considers an injustice.

In some instances the child is right, and injustice is being done to it. Mostly, however, the false reasoning of childhood produces the sense of oppression which is, of course, unjustified. Punishment in these instances is worse than useless; instead of making less the childish tendency to outbursts of temper; by making him more resentful it increases the tendency. The solution of the problem is to avoid giving orders to the child unless inspiration for proper conduct, and then try to convince him, if possible, of the necessity for the attitude you assume.

It is surprising how much less frequent these outbursts may become, without in any way impairing the proper training.

Training for correct habits can be begun in early infancy. It is not uncommon to find an infant have stool at a stated time in a receptable the size of a soap dish at the age of three months. There is, however, great variation in the response of infants to training.

There are no lazy children. As time goes on, and our knowledge increases, we find that the lazy child is a sick child; not necessarily with fever and all that goes with our conception of disease. Such a child may be suffering from obscure disease such as an undersecretion of thyroid gland or of one of several other glands in the body.

He may be suffering from a chronic poisoning either from the character of the food, as already referred to, or from too much or too little food. To chronic constipation; to the absorption of pus from some hidden source as the tonsils, sinuses, or carious teeth. Or there may exist some defect in vision or other sensory function which may produce the appearance of laziness or stupidity.

Adenoids are also sometimes responsible for this condition.

One of the important causes of trouble in childhood is caries of the teeth. This may lead to loss of appetite and an intense anæmia, which clears up remarkably with the filling or extraction of the diseased teeth.

The mouth and nose are the entrance point of most of the infections.

Formerly it was the custom to wash out the baby's mouth before and after feeding. This procedure has been abandoned since it was found that injury to the mucous membrane invited infection instead of repelling it. Disease is only contracted by contact, practically never through an intermediary. Inhalation of infected dust, and contact of the mucous membrane of the mouth with infected utensils such as cups, glasses, and the like. Contact by kissing or passing food about, each one taking a bite. These are the usual methods by which diseases are contracted.

It is well to remember that the most contagious period of contagious diseases is just before and at the time of the eruption, and there is rarely any further danger when nasal or ear discharges or sore throat have disappeared.

The hygiene of childhood includes vaccination—vaccination against small-pox, and against typhoid fever. Injection of diphtheria anti-toxine when a child has been exposed to the disease.

Before closing it may be well to call attention to certain lay medical traditions which like evil thoughts will not down, and the dear old grandmothers just know that the modern physician who does not practise and preach them is not in any sense to be trusted.

1. That when the baby begins to drool he is teething.

As a matter of fact the salivary glands become active at the third month and practically all babies drool at this time. Teething rarely begins before the sixth month.

2. That the second summer is more dangerous than the first.

This is, of course, not true; but had its origin in the fact that in former times babies were chiefly breast fed the first summer, and artificially the second. The art of feeding and the quality of the milk were so much inferior that sickness and death were more frequent in the second summer.

3. In some way the idea became prevalent that a baby born at the seventh month was more likely to live than the one born at the eighth month. This is also untrue.

4. That bow legs are due to too early attempts at walking. As a matter of fact this condition is the result of rickets which

is a disease of improper nourishment and hygiene.

5. That crying will induce rupture. If this were true all babies would be ruptured. Crying, of course, accentuates, and thereby is often the means of calling attention to an existing rupture.

6. Washing the hair or bathing is not to be thought of for a moment in case of sickness, especially those contagious diseases with skin manifestations.

As a matter of fact bathing is one of the most valuable therapeutic procedures we possess in these conditions.

7. That under no circumstances must a ray of light fall upon a child suffering from measles; else it will be blinded.

Occasionally the eyes in measles are so much inflamed that the light is painful, and the light entering the room should be subdued; but in the vast majority of cases there is no need for this. The room, whenever possible, should be kept as bright and cheery as any sick room.

8. That feeding banana to an infant is little short of murder.

The truth is that the overripe banana is one of the fruits best tolerated by infants, and more desirable than most because available when other fruits are scarce, and because it is the only fruit having real food value.

In conclusion: It is well to remember that babies were made before houses, and that the only costume of the first babies was that which nature provided. That all outdoors is the baby's natural habitat. That air, light and water are natural to it. That after the suckling stage is past, foods not too refined are desirable.

666 West End Avenue, New York.

DETERMINISM.

Determinism is a hypothesis with which the sciences cannot dispense, and which daily leads to new advances. Experience shows us that facts succeed each other in regular order, but since it deals only with a small piece of the world and with a short period of time, we cannot tell whether the order in question is absolutely uniform, and whether the succession of the antecedent, which we call the cause, and of the consequent which we call the effect, is necessary in the metaphysical sense. It is even conceivable that there should be in, in certain stellar regions, an entire absence of laws of succession, and that absolute indeterminism should prevail there. We may, without proving untrue to the principles of positivism, assume an intelligent and free Creator. We can never reach the absolute, the relative alone belongs to us. We consequently proceed as though the law established by observation and induction were immutable, as though the order of facts were constant, as though the determinism of phenomena were universal and absolute. That is to say, we invariably proceed like the positive and experimental sciences, which have no need to trouble themselves about the absolute and first causes; we merely wish to substitute positive science for metaphysics, preferring to a science that calls itself absolute, and that is in reality hollow and barren, a science that knows it is relative, but gradually brings nature under the sway of man and his industry, a science that is useful, and the source of all progress.

There is no such thing as a distinct criminal type, and a careful study of anthropology does not justify the conclusion that there is. Our prison population, made up as it is of the weaklings of society—the flotsam and jetsam—who are incapable of and unable to maintain their places in the competitive struggle for existence, are not criminals in the deterministic sense, but they are necessarily of that diathesis from which we may expect, to a greater or less degree, antisocial attitudes.—D. C. Peyton, M. D., *Jour. Ind. State Med. Assn.*

The sanitary conditions of the places of employment have a distinct and direct bearing in the causation of disease through poor general conditions, poor lighting, heating and ventilation, overcrowding, excessive humidity and special conditions of deleterious gases, fumes, dust, poisons and the like. These conditions are so obviously causing disease and are so prevalent in so many industries and causing so much direct injury to the workers that the general public have come to consider these as the full extent of the damages for which industrial conditions are responsible.—B. S. Warren in *Pub. Health Rep.*

INTERESTING OCCUPATION FOR THE CONVALESCENT.

By Charles Cristadoro, Point Loma, Cal.

If there be one retarding element in sickness more hurtful than all else, it is introspection. I do not believe any physician, surgeon or experienced nurse will disagree with me. Given two patients (imaginary, of course) of similar temperaments, constitutions, ailments, etc. To one give interesting work of some kind, occupation that gives hand or brain employment. To the other give nothing but the environment of his snow-white walls and the furniture of the room, or, if in a ward, the spectacle to dwell upon of human misery de facto.

Of the two convalescents, which one will leave the sick room first? Just the difference between intro and extrospection.

The skilled conversationalist will ascertain the subjects in which his caller is most interested and guide the conversation along those lines, and not a moment lags. An invalid and a shut-in myself, I've tried that over and over again and gratification always follows. A few questions adroitly put and the rest is easy even when a caller comes for the first time.

A nurse to the manor born, experienced and tactful, will do the same thing: ascertain what the "line" of her patient is and ask opportune questions—and naturally get the patient interested, alert, alive!

Medicine and surgery are, respectively, inexact and exact sciences, but nursing comes into the field of scientific psychology.

Let me instance, and it is a good example because it is my own case and my statements are based otherwise than on hearsay or casual observation.

I spent 100 days in a hospital recovering from an operation where the chances were 1,000 to 1 against me. If I did not die on the table then "the nurse did not live that could carry me through." To all my friends read the legend above the operating room door, "He now entering here leaves all hope behind."

Lack of apprehension or a spirit, more exactly expressed, of "don't care," enabled me to joke with the solemn, white-enshrouded nurses who with wondering eyes gazed upon me, rattling unconcernedly and good humoredly on until the ether put an end to my loquacity. They put the best nurse in the hospital upon my case, a graduate from an eastern hospital taking as it were a self-imposed post-graduate course—in getting acquainted with the ways of people and physicians in her new environment.

I came out of the ether in my cot in the room and I believe the first thing I did was to genially compliment the nurse upon the air she was gently humming, which started her smiling.

Now to make a very, very long story very, very short, every morning at 7 o'clock she would look into my room and "size me up." She seemed to know just what kind of a night I had passed, and when, an hour later, the bedside nursing table was wheeled into my room, she was "on the job" in more senses than one. All smiles and quiet laughter and ready with some subtle joke that would "get a rise" out of me if I were introspective and depressed, and from a continuous condition of dejection I was forced into one of joviality and extrospection. And the long and tedious and dangerous ordeal was gone through with, morning after morning and she left me in good spirits for the rest of the day.

If, on the other hand, when she opened the door of my room, she found me bright and I gave her a cheery, welcoming "good morning," when my time came she went about her work as a "machine nurse," as sober as the proverbial judge or crusty doctor. I didn't need diverting stimulation along the lines of introspection prevention, and she let me prattle along. I needed no stimulation. And people wondered, and wonder yet, how I pulled through and lived to tell the tale. How much had the psychological influence of that nurse to do with it? I claim to this day that the surgical part of my case was but 5 per cent. incidental, that

95 per cent. of my cure was the nursing, along the lines of introspection prevention.

Amusing and interesting, diverting and exalting the patient is worth a ton of medicine and a score of hypodermics. And there follows no reaction.

And the moment I could be braced up in bed pencil and scratch-block were given me, and then I was happy indeed. I could write to my friends and not have to dictate letters to my nurse. How much my pencil had to do with my cure I do not know, but I do know that the three years I have so far lived my pen has been my hypodermic, my nursing still going on and to go on as long as I live, by the best of all trained and untrained "practical" nurses, my good wife. She was in the hospital and had a cot in my room and in the battle to keep me on this earth she too played a great part. And the introspection that meant death to me was fought tooth and nail.

But it was noticed that I gained great headway when I was allowed to sit up and write, when I had interesting occupation. I repeat it, interesting occupation.

I have often thought that had I a boy patient (with a surgical injury) convalescing, that the moment he could sit up in bed I would give him a jack-knive and a shingle. Untidy hospital practice to have to clean up the shavings that boy would make of course, but note the effect upon the boy! He's happily occupied and that penknife is his hypodermic and the knitting bone somehow did not hurt half so bad when whittling!

That one illustration covers the whole field and, when possible to be put in practice, is an adjunct along the line of convalescence the value of which is beyond compare. Absorbing work. Interesting, diverting occupation for the invalid. Stories told to the sick child that takes him afield in the sunshine, where he hears the bees, sees the birds, watches the limpid fish-laden brook and smells the wild flowers and hears the breezes whispering through the swaying boughs. Diversion supreme for that child, an invigorating, refreshing tonic for its mind.

Had I aught to do with the direction of the Sage Foundation Fund I would build a lath-house, either upon the roof or in the yard of hospitals. A time comes when a patient can be transferred by stretcher to a cot in the open, on the roof or upon the porch.

In California, we have the lath-house that tempers the breeze from the ocean and moderates the sun's rays, the opposite of the enclosed glass and iron green-house. In this enclosure (made of a few two by fours and a few bundles of lath) blooming plants and mantling ferns are grown to luxuriant perfection. Boxes filled with earth and hanging baskets are cheaply employed. You wheel an invalid into an enclosure of this kind and the environment is as unto a paradise. Refreshing, diverting, interesting, pleasing, exalting. My days are spent in such an enclosure, day after day, and I speak knowingly. The plants take on a new growth day by day, bees come and delve into the blossoms, and humming birds flit about, and passing through a sunbeam send out shafts of reflected color that would put a hundred rainbows to the blush.

A very few dollars would construct and equip such a retreat and the untold pleasure and good such a refuge would exert upon a convalescent would be difficult to estimate. It's an interesting, almost an interminable subject, this diversion of a convalescent, but one well worthy of the attention of the managers of hospitals and sanitariums in the land, and as one sentenced to an invalid's chair and a condition of continuous convalescence I make these suggestions hoping that they may fall upon fertile soil.

A Golden Rule.—The first rule, then, for a good style is that the author should have something to say; nay, that is in itself almost all that is necessary.—*Schopenhauer.*

The Quick and the Dead.—There is a dead medical literature, and there is a live one. The dead is not all ancient, the live is not all modern.—*Oliver Wendell Holmes.*

MINING CASUALTIES AND DISEASES.

A COAL strike is singularly pervasive in its baneful influences; and unusually provocative of discomfort and even suffering among many not immediately concerned as employer or laborer. Civilization is impossible without heat, lacking which we must revert to savagery. Cooking, the comfort of the home, lighting, the infinite variety of things constituting the luxuries, the decencies, the culture, that in the aggregate mean civilization, cannot be conjured up without fire. It is fire which for the most part makes machinery go, and which produces electricity. And it is by means of the coal dug out of the earth that this form of energy is almost entirely obtained. The mining industry adds every year two billion dollars to the wealth of these United States.

One among the sundry reasons for the dissatisfaction which prompts the miner to strike, lies in the unusual hazard of death-dealing accidents which he must meet, and in the conditions conducive to disease that are peculiar to his occupation.

It would be an unusual "thriller" in fiction that could vie in interest with the simple statement of facts in the case of Joseph Clary, a miner, who was entombed in a drift by the collapse of part of a mine roof. Water began to rise inside the imprisoning walls. Without was Clary's father, working desperately, heading the rescuers; whilst the mine pumps were pushed to their fullest capacity to check the rise of the water, which was known to be gaining on them. At home the sick mother was waiting constantly for word of this imprisoned son.

Meanwhile Clary slept the first day, at intervals, and speculated how long it would be before the rising tide would become dangerous. The second day he heard the noise of the drill, behind which the rescuers were working. The third day he spent in reading, by the light of an electric lamp, newspaper accounts of his own peril, of the work of rescue, and in conversation with his own mother over the telephone. Food, drink, newspapers, electric light and telephone had been lowered to him in the narrow passage-way made by the drill into the blocked-up drift; here was beautifully exemplified modern improvement in the process of relieving imprisoned miners. Yet while this hero of fact rather than of fiction was talking by phone with his mother, the rising water swept away the crumbling ledge of rock on which he stood; and he collapsed when finally the rescuers shoveled their way to him.

Now, this case of Joseph Clary is simply trivial by comparison with some mining accidents that have occurred in recent years. Here is one which for horror rather puts in the shade that episode in Ben Hur twenty centuries ago, when the trireme was sunk, and with it most of the galley slaves helplessly chained at their oars. On April 8th, 1911, at Banner, Alabama, soon after one hundred and sixty-five convicts had gone into the mines, there was an explosion over a mile under ground. One hundred and ten convicts and five free laborers, including the heroic convict foreman, O. W. Spreadling, all met death. It seems the explosion was of powder and dust; and it is believed not to have sent immediate destruction through the mines, but, by smashing a ventilation fan, to have allowed black damp to accumulate.

These convicts, mostly negroes, had been hired from a dozen counties in Alabama. It is related that upon the explosion several convicts who had been in the mines before understood that if they would live they must run for it; and they headed for the mouth of the mine. And in this race with death forty-five managed to get out. Rescue parties were immediately at work; and they discerned convicts stumbling all over the place, and dropping as they were downed by the foul air. No relief could be given, for the rescuers, fearing they would themselves be overcome, retraced their steps to save their own lives.

But let no one imagine relief parties lack-

ing in heroism. Immediately upon an explosion comes a leader's call for volunteers: "I don't want married men—there are enough of these dead in the pit already. You know the dangers. I will lead." And there never was greater heroism in all time than that with which the response is made. In the Hanna, Wyoming, explosion twenty men were killed in the effort to save twice that number of their "buddies"; and within the minute there were another score to take the place of the first volunteers. Think of a mine boss, three minutes after an explosion, groping his way on hands and knees, his head swathed in cloths so that he could endure the scorching heat, with a rope around his waist, in absolute darkness (for no lamp must be lit for fear of another explosion), pulling out eight unconscious men one after another; he and his find being dragged together over rocks, timbers and burning debris; coming out several times with clothes afire, and stopping only when himself overcome by the after-damp. Yet others at once took his place, into that seething pit, where were awful noises, groans of wounded men, screaming of frenzied mules. Thus was every man whose heart was beating when found, carried out: one impaled and writhing on the sharp end of a broken plank, the point sticking a good three inches through his body; another blinded and mad with burns and with broken bones.

Even more dreadful than such disasters have been death by after-damp or by starvation. Men have lived a fortnight and more by eating candles, rats, oiled paper, soap, miner's oil, and have come out with hair grown white. After one explosion the bodies of six little trappers, all under twelve, were found gathered behind a door which led to safety, and which had been blocked by fallen roof.

Such are incidents, the like of which we have all been coming upon with painful frequency in our morning newspapers. We read how upon a mine explosion flames shoot high in the air; men are trapped like rats in a hole; how rescue parties are powerless to save them; how, if the explosion has not immediately done its human butchery, death by fire remains, and is perhaps more merciful than the slow starvation and the thirst which ends many a life —whilst weeping, frantic and bereft women and fatherless children gather about the pit-mouth. And what pitiless aftermath, when each such horror deprives many scores of families of their bread-winners, and makes them altogether and hopelessly destitute.

In America these mine accidents seem unusually fruitful. "We kill every year more than all the rest of the world beside." There are now 800,000 coal miners working in the privately owned coal mines in the United States. Under State regulation 30,000 coal miners have been killed and 80,000 injured during the last twenty years. In advocating that the Federal Government safeguard the life of the miner (by an interstate mining commission) as it now does that of the railway worker, Dr. John R. Haynes has stated that national regulation in European coal mines has enormously reduced the percentage of fatalities in the last fifteen years.

In the one year 1910 more than 10,000 miners were killed, mostly in Pennsylvania, whilst 250,000,000 tons of coal were wasted by reason of lax methods of mine working. A single fire that has been burning near Summit Hill, Pa., for fifty-one years is estimated to have destroyed $25,000,000 worth of coal.

There is now a most efficient Federal Bureau of Mines, at Washington, D. C., of which Dr. Joseph A. Holmes is director; this bureau reports to the Secretary of the Interior. Dr. Holmes has set forth the following factors as conducive to explosions:

1. The character of explosives used in certain mines.
2. The quantity of the explosives which may be used in the presence of gas and dust.
3. The quality of the gas and its dangerous percentages.
4. The nature, extent and insulation of electric currents used.
5. The kind and condition of the miner's lamps.
6. Probable underground fissures, determinable by the study of strata from which gas may burst out.
7. The character of the coal dust.

To these factors must be added the carelessness or perversity of individual miners. Many men die by reason of one man's possible mistake or untoward conduct. Every man entering a mine, it seems, takes in his hand not only his own life, but also those of his fellows—his "buddies." Seemingly adequate precautions and careful inspections are oftentimes nullified by the miner's disregard of danger. Men have been seen pouring powder into cartridges from a twenty-five pound can, with their open lamp dripping sparks all about. Thus, just

when the State officer stepped from the shaft of a Pennsylvania mine, after giving it a clean bill of health, an explosion in that same mine destroyed 125 men.

It is oftentimes difficult to get miners to observe the precautions prescribed and essential for their own safety. They break or misuse their safety lamps, or surreptitiously use naked flames in gaseous mines for lighting their pipes or other purposes. Despite admonitions and penalties, there are always those who will imperil their own lives and those of their fellows.

There remains to be considered an element of danger which investigation and the application of scientific knowledge is now steadily minimizing—"those forces and processes of nature which will now and then malignly triumph over all the precautions of science, and cause catastrophes to which no term can be better employed than 'acts of God'." It is certain, however, that the superb work of Dr. Holmes and of his able associates in the United States Bureau of Mines is clearing up much of the mystery of mine disasters; is more and more putting responsibility upon human shoulders, and giving less and less occasion for objurgating Providence.

Among the achievements thus far of this excellent Bureau are: Investigations concerning mine gases and dusts; permissible explosives for coal miners; the escape of gas from coal; coal-dust explosions; coal-mine accidents. Instruction how parties formed to rescue entombed men are to use oxygen helmets; and as to what first aid parties must do. Methods of mining are investigated, with especial reference to the prevention of accidents and the welfare of miners. Owners and their employees are educated in the proper use of explosives, electricity, hoists and other paraphernalia; in the equipment necessary to driving shafts and tunnels; and to taking out coal and minerals. An important digest has been prepared of the laws of the States and of foreign nations regulating the operation of mines. On these subjects and on much else that is vital to the miner, important papers, containing detailed statements and advice, have been printed; and these are at the disposal of any citizen who will apply for them by letter. Especially important to mine operatives should be the circular on the *Prevention of Mine Explosions.*

The electrical section of the Bureau of Mines is particularly concerned with the problems of safeguarding life and property from the dangers attending the underground use of electricity. Its working headquarters are at Pittsburgh, Pa., where also is the mining experiment station; and this section heartily urges co-operation in its work by mine owners, operators, inspectors and State mining departments.

The Bureau finds that most mine operators, if not all of them, would be willing to install safer electrical equipment if the market could supply it. "Some of the manufacturers are now developing motors and switches designed to be explosion proof, and the Bureau of Mines has always found manufacturers of electrical apparatus ready to co-operate in its electrical investigations." There are three principal dangers from the use of electrical equipment in mines: from electric shock; from explosions caused by electricity; and from fire started by electricity.

The practical solution of the problem of safeguarding the use of electricity in mines calls for the adoption of protective measures and of devices that are simple, rugged, "fool proof," and as inexpensive as possible. At the same time both measures and devices must be entirely effective, or they will become a menace. There is a field for devices reducing the danger of shock from the trolley wire; and for devices preventing the ignition of gas on motors, switches and other circuit opening apparatus. There is demand for acid-proof material for insulating wires and cables; and there is room for improvement in the methods of installing electrical equipment underground.

The Government, through the agency of the Mines Experiment Station, is also co-operating with the manufacturers of fuses. Those who desire to make standard fuses have been asked to send samples to Pittsburgh, where they could be tried out thoroughly. A list of fuses which have passed certain requirements have been supplied to State mine inspectors, and made public in such other manner as has been considered desirable.

Fire damp, in its chemical composition, and in its properties, is akin to methane (marsh gas), which produces will-o'-the-wisp, and which forms about 75 per cent. of the mine composition. A safety lamp will detect fire damp in a mixture of one part to twenty of air; one sees inside the gauze a halo of blue light, which may grow until it fills the lamp. More than one part of fire damp to ten of air is most dangerous and explosive; until it gets to an

equal mixture, when lack of oxygen prevents combustion.

How coal dust explosions come about has not been precisely determined; they are the most frequent cause of serious disaster. Dry coal dust, blown into the air and lighted, perhaps by a "windy shot," will explode; the rush of air in advance raises more dust and the force increases until a wet place or the open air is struck. Mine explosions are caused by the admission of fire damp by a defective safety lamp, or by a naked light, or by a flame from a shot, or by the explosion of air impregnated with fine particles of coal dust. A "windy shot" or a badly fired blast may have sufficient force to kill all the men in an entry; and it is generally the cause of dust explosions, which, with the consequent roof-falling, are responsible for most violent deaths among miners.

When powder used in mines for blasting is "tamped"—that is, placed too lightly in its nest—it flares and becomes a windy shot, a long flame leaping straight out from "the face"; thus are gas and coal dust ignited, a mine explosion resulting. It is noteworthy that in Belgium much disaster has been avoided by the mutual agreement between operators and miners to eliminate men known to be reckless, from positions of danger. In consequence it would seem that there has been no explosion during seventeen years (up to 1908) in the most dangerous of the Belgian mines.

Experiments are now making for the substitution of water instead of powder in mine blasting. The water method should be infinitely less dangerous. Herr Carl Meissner, the German mining official, knowing of an explosion in mines where there were no "gas pockets," became convinced that while the gas might not be a part of the coal, it was nevertheless in the coal seam, or perhaps in the pores of the coal. He believed that if water could be poured into the pores of the coal it would drive out the gas. He had a long nozzle built to fit exactly into a hole bored by the miners for the insertion of their powder. A very small quantity of water—only a few quarts—having been injected, the gas was driven out with a hissing sound; it was then found that by inserting just a little more water the coal would be sufficiently cracked and broken for a blow of the pick to bring it tumbling down. One would think it would be feasible to introduce water into fissures in this way in the late Fall; if this water were to become ice during the Winter its well-known irresistible property of expansion in changing from its fluid state should disintegrate enormous masses.

Germany is reported to have excluded powder from its mines; and is now mining coal by water on a large scale. Possibly it foresaw powder could be used more picturesquely some other way. Mr. Carl Scholz, president of the Rock Island Coal Mining Company, is planning this method for his mines in Indiana, Illinois and Oklahoma. The mines in Alabama and in West Virginia, and in British Columbia are now being extensively worked by water instead of by powder.

Of peculiar medical interest is the character and the relative amount of dust in mines. This factor has much to do with disease in miners. The lungs of miners examined on autopsy exhibit to an amazing degree the lesion called anthracosis, which results from the inhalation of coal dust. The knife grits as it cuts such a lung, and the cut surface is grey-black, exuding minute particles of coal; one is amazed to find how generally such a lung is thus impregnated, and wonders how miners survive so long as they do, with so much respiration area involved and put out of action.

Strangely enough, however, miners suffer less from tuberculosis (consumption) than any other class of laborers. The clergy even, suffer more than do miners; and among all occupations only farmers, bankers, brokers and company officials suffer less. But 6.4 per cent. of our miners die of consumption; and this is astonishing in an occupation so insalubrious.

However, this observation obtains only regarding wet mining; and several reasons have been forthcoming for such comparative immunity from a disease which, by and large, destroys every third or fourth white life in civilization, and every other adult colored life. The explanation is offered that miners are picked men to begin with, the nature of the occupation precluding all of poor body; that there is some antiseptic property in the coal dust, which the miner inhales in such huge amounts; that in "wet" mining the point of saturation is so nearly reached as to make impossible the dessication and dissemination through the atmosphere of the tubercle bacillus,

which is the specific germ of consumption.

None of these explanations is altogether explanatory. The last might do well enough were it not for the fact that the air in mines is, at any rate in winter, fairly dry (when, by the way, most explosions occur). In summer, on the other hand, the air being relatively cooler than the air outside, the moisture is precipitated, and the mine dust is damp or wet.

In distinctly dry mining the consumption mortality is very high, as is the case in most dust-evolving occupations. In England the tuberculosis mortality is very great among tin, copper and lead miners—whilst coal miners show varying rates in different coal fields, but all low.

A death rate of 70 per 1,000 has been cited among white rock drill miners of the average age of 35, in the South African gold fields, as against 6.3 per 1,000 among English coal miners—a mortality difference certainly due to lack of preventive measures against dust-dissemination. So terrible have been the ravages of consumption among these African miners that the Government has been considering a bill for the compensation of these thus incapacitated, and for the benefit of their dependants. With the humane purpose in view of converting dry into wet mining, by means of jets and sprays, the Transvaal Chamber of Mines held an exhibition in 1903, in which were demonstrated, among other machines, the water-drill of Leyner, and the apparatus of Britten, which latter, whilst laying the dust, disposes also of the nitrous fumes generated in the blasting.

WHAT SHOULD BE KNOWN ABOUT CANCER. IN EARLY TREATMENT LIES THE HOPE OF CURE.

THE NATURE OF CANCER.

Its Local Beginning: Cancer is almost invariably at first a local disease.

It is easily cured if promptly recognized and at once removed by competent treatment.

It is practically always incurable in its later stages.

The Danger Signs: The disease usually begins in some unhealthy spot or some point of local irritation.

In external cancer there is something to be seen or felt, such as a wart, a mole, a lump or scab, or an unhealed wound or sore. Pain is rarely present.

Cancer inside the body is often recognized by symptoms before a lump can be seen or felt. Persistent indigestion, with loss of weight and change of color, is always especially suspicious.

Persistent abnormal discharge from any part of the body should arouse the suspicion of cancer, particularly if the discharge is bloody.

The early and hopeful stages of cancer are usually painless.

THE CURE OF CANCER.

What You Should Do: Fear the beginning of cancer.

Never be afraid to know the truth.

Any painless lump or sore appearing upon your body should be examined by your physician.

By the time a cancer has become painful the best chance for its cure has passed.

But even a painful cancer can be removed permanently if it has not extended too far beyond the place where it began.

Seek Early Examination: If you notice that a wart, mole or other "mark" begins to change in appearance or to show signs of irritation go to a physician and have it completely removed. Do not wait until you are sure it is cancerous.

All lumps in the breast should be examined. In women the normal change of life does not lead to increased flowing, which is always suspicious, as is the return of flowing after it has stopped.

Medicine Useless: Medicine which relieves pain does not have any effect upon the disease itself; it simply produces a period of freedom from discomfort and therefore delays the proper treatment.

RADIUM AND CANCER.

Limitations of Radium. According to the most authoritative opinion the curative effects of radium are practically limited today to superficial cancers of the skin, and to superficial growths of mucous membranes and certain deeper lying tumors of bone, etc., which are not very malignant. Radium has probably been shown to exert a definitely curative effect on certain of these cases, while the disease is still local and in the early stages.

Radium definitely relieves suffering when used in the advanced stages of deeper-seated cancers; but in those cases it improves only the visible or tangible manifestations and exerts no effect upon the disseminated disease as a whole. It is believed that there is as yet no proof that radium has finally cured any case of advanced and disseminated cancer.

Radium Fakes: The public should take warning against dishonest and fake, money-getting radium-cure establishments conducted by individuals who possess little or no radium, and have no knowledge of its use. These people promise cures, but are, in reality, unable to obtain even those palliative effects which are possible from radium.

The best results of radium therapy can be secured only when comparatively large amounts are available for use and the present limited world's supply of this metal places it out of reach of the great majority of patients.

THE PREVALENCE OF CANCER.

A Menace to the Individual: Cancer is of greater frequency at ages over forty than tuberculosis, pneumonia, typhoid fever, or digestive diseases.

At ages over forty one person in eleven dies of cancer.

One woman in eight and one man in fourteen over forty years of age is attacked by the disease with fatal results.

Largely because of public ignorance and neglect cancer now proves fatal in over 90 per cent. of the attacks.

A Menace to the Nation: Of the 75,000 deaths from this disease in the United States in 1913, about 30,000 were deaths from cancer of the stomach and liver, 12,000 from cancer of the uterus and other organs of generation, 7,500 from cancer of the breast, and about 25,500 from cancer of other organs and parts.

A Menace to Society: Cancer respects neither race, creed, nor social position.

It is the common enemy of all mankind, attacking rich and poor alike.

Its insidious onset occurs at the most useful period of life; and death is most common at the age when the care and guidance of children and the continuance of business responsibilities make the mother and father the most useful members of society.

THE CONTROL OF CANCER.

A Message of Hope: The only cure for cancer is to remove every vestige of the disease.

The only sure way to do this is by a surgical operation.

If taken at the beginning, the majority of cases of cancer are curable.

All cases will end in death if let alone.

Records of our best hospitals prove that the chances of cure are very high with early operation, and that these chances decrease with every day of delay.

Early diagnosis is therefore all-important.

A National Campaign: The American Society for the Control of Cancer is studying these hospital records and will spread nation-wide the message of courage and hope in early recognition and prompt operation.

By publishing circulars and articles in newspapers and magazines, and by organizing lectures and public meetings, this society is conducting a general campaign of education based on the latest knowledge of the disease.

Thoughtful and influential people can help this work by joining The American Society for the Control of Cancer. Write to the office, 289 Fourth Avenue, New York City, for further information.

RURAL SANITATION.

CHICK GERM CARRIERS.

It is charming to observe how everybody keeps on helping everybody else. Certain of the discoveries in medical science, by which grievous diseases have been prevented or cured, have been suggested by the work of people who were and are not doctors, especially in the sciences underlying agriculture. In fact the whole of modern preventive medicine is founded on Pasteur's investigation of a silk worm disease and the initial discovery of a disease germ, that of anthrax, which is essentially an animal disease. On the other hand agriculture has been helped by the medical discovery that there are human germ carriers and that such diseases as typhoid fever and cholera are distributed not only by those who have suffered those diseases, but also by some that have never experienced the symptoms of them,—have just harbored the germs in their systems and have distributed them wherever they have gone; like the cook who, though she never had typhoid herself, in those migrations from family to family the comic papers tell us about, left a long series of typhoid cases in their wake. Indeed it has been figured out that one in every thousand of us is a typhoid carrier.

The medical methods by which such things have been proved have been applied by L. F. Rettger and his associates in the Storrs Agricultural Experiment Station in the study of Bacillary (that is, germ) White Diarrhœa of Young Chicks. And these investigators have proved that the germs responsible for this fowl disease is the *Bacillus pullorum,* by which ovaries are infected; this germ is thus retained in the egg and is transmitted to the developing chick.

Chicks that recover from white diarrhœa may continue to harbor the *Bacillus pullorum* for a long time, perhaps while they live, without revealing any evidence of the disease; and it is considered that when such chicks reach maturity the hitherto latent infection becomes actively centered in the ovaries by reason of the intense physiological activity of those organs during egg production. Or there may be infection of the ovaries after the chick's maturity through the droppings of diseased chicks or by louse and mite transmission. Infected female chicks may develop into permanent *Bacillus pullorum* carriers and be a constant source of danger to young and old stock. This carrier condition may be demonstrated in fully one-fourth of an infected flock. By such investigations losses of many thousands of dollars in the animal industry should be averted.

THOSE CHESTNUT POISONING CASES.

October last, when headline stuff was scarce, a lot of newspapers told how chestnuts collected from trees affected with blight were poisonous and were producing disease and death; mostly around Hartford, Conn., variously in Massachusetts; one case up New Hampshire way; and another down in Jersey—above twenty cases in all. Besides, in Western Massachusetts gray squirrels were dying, presumably from eating chestnuts off those blighted trees.

Well, Dr. Dwight Marsh and his associates of the Office of Drug and Poisonous Plant Investigations, of the United States Department of Agriculture, got busy. And they found that all the reported cases in Western Massachusetts came down to two: in one of these the illness had nothing to do with chestnuts; and although the other patient had been eating chestnuts that came from an area in which some of the trees were affected with blight, his family doctor could not find that chestnuts had anything to do with the trouble. In Eastern Massachusetts not one case was found that chestnuts, good or bad, had anything to do with.

In the New Hampshire case the boy had been eating a considerable number of chestnuts; which had been gathered, however, from perfectly healthy trees—just a case of plain, old-fashioned mulligrubs, calling only for castor oil and the usual caution against superalimentation in the future.

Fact is—and most people will agree—raw chestnuts are not very digestible anyway. Here even the adamantine digestive apparatus of the small boy is not absolute proof. The result: sore mouths and the boy "all broke out in a rash," as with so many other indigestions. Also there are those having an idiosyncrasy, like that toward hives or hay fever, which asserts itself when many chestnuts are eaten.

And about those gray squirrels. A game warden found two such dead that he assumed had perished from disease, since he could find no shot marks on them. Dr. Marsh had chestnuts collected from trees which were said to have been associated with cases of illness, and fed them to rats, rabbits and a monkey. All these creatures (the monkeys especially) ate these chestnuts with avidity; and developed no disease. Then, to make absolutely sure, extract of chestnuts collected over a "blight" area were injected into mice; no disease resulted. And a chemical examination of the nuts for the detection of any toxic principle gave "negative" results.

There is thus no ground for imagining nuts from trees affected with chestnut blight to be any more injurious than those from healthy trees. This ought to be known generally, because last year this occasionless chestnut blight scare resulted in dealers having to throw away their stock of nuts; a most unjustifiable loss both to them and to the venders, oftentimes very poor men, who depended on this traffic for a living. Such losses should be made up by generous purchases, in so far, at any as would not be conducive to rash indigestions.

THE CAT AS A RATTER.

No globe trotter has ever come anywhere near the rat in the multiplicity of its voyages and the latitudes and longitudes it has visited. The gray (Norway) rat and its black kinsman have colonized in all parts of the world, distributing the flea, which is the common carrier of the germ of bubonic plague.

Wherefore our national and local health officers are constantly anxious about rats. Many shipmasters take along cats on their voyages under the optimistic delusion that thus are the rats aboard killed off. Well, when the British steamship Ethelhilda, arriving at the New Orleans Quarantine Station, its Captain assured Surgeon G. M. Corput, of the United States Public Health Service that rats could not live in his vessel, certainly not in his cabin, because his cat was a particularly prime ratter. But our surgeon just thought he'd make sure. So the cabin was fumigated. During which proceeding an inadvertent and deplorable cat-astrophe occurred. For by the irony of fate the poor feline was forgotten. The result? One defunct cat and twenty-four equally dead rats in the cabin alone—with many other dead rodents in every other part of the ship.

Apart from ship rats and their disease-possibilities rodents everywhere occasion a stupendous economic loss (or rather waste, since it is preventable) by devouring crops and household provender. You can absolutely rat-proof your house. How? That's another story, which was told in the June, 1914, issue of THE GAZETTE.

IT is a truism that the efficiency of the social unit is conditioned more by his physical status than by any other one factor. That the inefficiency due to ill health, however, constitutes a burden to be borne by the whole of society rather than the individual is a concept which has been fully recognized only of recent years.—J. W. Schereschewsky, *Public Health Rep.*

WE should all remember that to be like other people is to be unlike ourselves, and that nothing can be more detestable in character than servile imitation. The great trouble with imitation is that we are apt to ape those who are in reality far below us. After all, the poorest bargain that a human being can make is to give his individuality for what is called respectability.—INGERSOLL.

PNEUMOCOCCUS BACTERIEMIA.

All physicians now agree that lobar pneumonia is an acute general infection having, in most sufferers from this disease, its principal lesion in one or both lungs. As in tuberculosis the question is important, as to the extent to which the infection is hematogenous. Thus far a tubercle bacillus bacteriemia has not been demonstrated to the satisfaction of bacteriologists; but this would not necessarily argue their absence from the circulation, because any technique adequate for the detection of tubercle bacilli in the blood may not yet have been elaborated. At any rate, no one doubts the presence of the tubercle bacillus in the blood of patients having acute general miliary tuberculosis; nor that in this very malignant and rapidly fatal type of the disease, the bacilli have burst through the body's lymphatic barriers.

In lobar pneumonia it seems unquestionable that, early in the disease at any rate, the pneumococci are taken up by the lymphatics and are passed through them to the lymph glands in their course; as the inflammatory process develops the lymph glands swell and their sinuses become packed with pneumococci. Whilst most of the latter are destroyed and never develop sufficiently to be demonstrated in the blood, it would seem that, especially in grave cases of pneumonia, pneumococci do get through the lymphatic bacterial filter and reach the blood stream. and this (observed Dr. Meltzer, in discussing his colleague, Dr. Cole's work on Pneumococcus Infection) occurs at a period when the blood has lost a great deal of its defensive ammunition; there is thus often a fatal issue "which explains why Dr. Cole and others could easily find bacteria in the blood only in fatal cases of pneumonia." In Meltzer's and Lemar's animal experimentation with cultures of a very virulent pneumococcus, bacteriemia resulted only in the fatal cases. In other experiments by Meltzer and Wollstein, with a non-virulent pneumococcus, typical pulmonary consolidations were obtained, with no mortality *and no bacteriemia.*

Is the pulmonary lesion but a sign of the disease, or is it a consequence? Apparently the anatomic changes in pneumonia are not the cause of death, nor do they present the essential features of the disease; on the contrary they are but manifestations of the body's fight against the infection (Meltzer).

Dr. A. R. Dochez has reported that in thirty-seven cases of pneumonia treated in the Rockefeller Institute the pneumococcus was not constantly found in the blood; this bacterium was isolated from the blood in one-half the cases studied. The course of infection in sufferers having pneumococci in the blood was more severe than when no pneumococci could be cultivated from the blood. Seventy-seven per cent. of patients with positive cultures died; seventy-nine per cent. with negative cultures recovered. In fatal cases of pneumococcus bacteriemia the number of organisms per c.c. of blood was very high in the last stages of the disease. In cases dying of pneumonia without discoverable bacteriemia, the disease was characterized by a rapid spread of the local pulmonary process. It is not unlikely that the symptoms of collapse, developed in the fifth or sixth day of lobar pneumonia, are oftentimes the expression of serious invasion of the blood by pneumococcus. Strains of pneumococci isolated from the blood of lobar pneumonia patients were usually of high virulence for animals; in a few instances where the pneumococcus isolated from human blood was of low virulence for animals, the patients recovered.

In certain cases of lobar pneumonia it seems that the pneumococci either invade the blood in great numbers; or having reached that fluid, grow so actively that death ensues from septicaemia—and this before any considerable area of lung has become involved.

Sleeping outdoors is beneficent not only for the healthy; but thus is also assured the cold air treatment now found essential for the cure of tuberculosis, pneumonia and many other diseases. The disadvantages of the tent, the porch, various window appliances and other contrivances for sleeping outdoors need not here be dwelt on; they seem to be obviated in the plan described by Dr. E. P. Hershey in *The Denver Medical Times* of May, 1914.

TWENTY-ONE CASES OF TYPHOID FROM ONE TYPHOID CARRIER.

A Farmer in Wisconsin, about six months after his supposed recovery from typhoid fever, infected three sons and his wife with the disease. From this time on, those who visited and ate at his house showed a marked tendency to typhoid until the actual number of victims reached twenty-one. At this point an investigation was instituted by Professor Ravenel, bacteriologist of the University of Wisconsin, and the farmer's urine was found to be inhabited by typhoid bacilli. The investigation showed that each of the twenty-one cases could be traced with reasonable certainty to this one carrier as no other carriers were found in the family, although all members of the family had suffered and recovered from typhoid. The report is published in the *Journal of the American Medical Association.*

THE SANITARY CONSCIENCE.

One of the most remarkable developments of this age in which we live is the awakening of a sanitary conscience. It is a new thought in the minds of many men that the care of the body and cleanliness of surroundings are a very considerable factor in the comfort, safety, and even the life and health of their fellow-men. The sense of moral goodness which comes from a clean and hygienic life is part of the doctrine of sanitary righteousness. Preventive medicine teaches that we must not only safeguard our own bodies against infection and keep our own surroundings clean for our own sakes, but quite as much for our neighbor's sake. It teaches the lesson of the unselfishness of community interest and has been a potent biological factor which underlies the present trend toward socialism. One man alone cannot fight the fight against the common foe—infection; it takes the combined and intelligent cooperation of the community.—*Professor Rosenau.*

THE HEALTH OFFICER.

The State, in the interest of its own preservation, and progress, has assumed control of certain activities closely affecting the life of every citizen. Among these are the care of the public roads, the distribution of the mails, and the education of the youth. Still other activities now in private control should be supported by the State for the benefit of the whole people. One of the most important of these and the one perhaps receiving most public attention at the present time is the care of the health of the people, a function now delegated largely to physicians, men who receive their reward for community service in the form of fees from private individuals. Under the present system the physician is prosperous in inverse ratio to the health of the community.

"The doctor is busiest during those seasons when illness prevails most. Were there no disease there would be no need of physicians. This would be an ideal condition for which the people would be glad, not because of hatred of physicians, but because of love for their own welfare. Since the physician to-day receives his reward from the curative side of medical practice he is not professionally interested in the prevention of disease. The public need is for a medical fraternity paid by the public whose interests will be as much in the prevention of disease as in the cure of it. Were physicians paid by the State, they would not fear the loss of income through working for the interests of the well while at the same time attending to the ill, because the lessening of illness would not necessarily interfere with their incomes. Further, the greater their success in the prevention of disease the less the labor that would be required in the cure of it.—*Professor Vogt.*

CORRESPONDENCE

AN EDITOR'S WOES.

To paraphrase the good old song. Taking one consideration with another, an editor's lot is not a happy one. Here is a part of a letter which has found its way into the GAZETTE sanctum: "It appears to a constant reader as though the *moral tone of* THE GAZETTE is not quite what is used to be. Most assuredly no one can do *more* to cleanse, purify and uplift, mentally, morally and spiritually as well as physically, than the physician, the trained nurse and the *Medical Magazine.*"

These observations certainly startled us, as though we had received a blow. Faults we have, both as Physician and as Editor. Our faults as physician are not always discoverable; old Diogenes realized that much about doctors many centuries ago when he declared that practitioners of medicine are fortunate men—in that their successes (their cures) are obvious, whilst their failures are hid beneath the ground. But our editorial faults are uncoverable, for they are patent on the printed page. And yet among our editorial faults we never realized our lack of moral tone. That shows how even editors do not live up to the Socratic dictum: *Know thyself.* In fact we had considered ourselves rather strong in the moral and even in the spiritual way—to the extent indeed that friends have feared we were suffering from a conscience working overtime, as from a fever and have advised us to take something for it—something by way of a counter-irritant: To take dinner in a cabaret; or dance the tango; or do like the man who most recklessly drank two bottles of ginger ale and got "real devilish" in consequence.

Naturally, then, the accusation gave us a sleepless night. And next morning we sent post haste to our most well-intentioned correspondent, asking for specifications. In what particular or particulars had we been lacking in moral tone? And when had the lack of moral tone in THE GAZETTE been observed—was this during our incumbency, since August of 1913, or was it possibly previous to our incumbency?

But we have received no answer to our anxious inquiries, although we were very careful to give the assurance that the information would be held confidential.

Seriously, however, we thank our correspondent for the criticism. And we beg to assure all our readers that we would be grateful for all such interest in THE GAZETTE. We are anxious to make this a perfect Journal of Personal and Public Health. That end we, being but human, shall probably not achieve; for 'tis not in mortals to attain perfection. But all the same this consideration is not going to prevent our constant striving. If, by chance, bouquets are handed us in these columns, we shall be grateful for them; but much more grateful shall we be for any adverse criticism that is offered us with helpful and chastening intent.

The Editor of THE GAZETTE: Please give me plainer directions for making cold water coffee as described in your September issue. We have no Austrian coffee biggin nor percolator.

[The department stores in all the great cities have for sale porcelain percolators which will answer admirably the purposes set forth in the article on Cold Water Coffee Infusion, to which our subscriber refers. If such percolators are not to be found in all American communities, one's dealer can procure them or they can be got by mail order.]

The Editor of THE GAZETTE: Publication in the September GAZETTE of my article on Homograde Thermometer greatly pleases me. I know of no other periodical in which I would prefer to have it appear—F. E. ASPINWALL, M.D.

THE LEISURE HOUR.

HISTORY, PHILOSOPHY, FICTION, HUMOR, SATIRE, POETRY.

LEISURE HOUR WAS FOUNDED IN THE BELIEF THAT THE PHYSICIAN IS BUT HUMAN; THAT HE LOVES THE BEAUTIFUL IN THOUGHT AND SENTIMENT AS EXPRESSED IN LITERATURE, AND THAT HE IS AT TIMES SURFEITED WITH TECHNICAL MATTER. SHORT, CRISP CONTRIBUTIONS ON ANY OF THE SUBJECTS NAMED IN THE SUB-HEADING ARE INVITED TO THIS DEPARTMENT.

THE PRACTICAL OPTIMIST.

There are all sorts of definitions, there's every kind of definition of the optimist—the man who sees an orange in a lemon, and so on. And there is not a little cant in some of these definitions. Most human progress has been made through the efforts of men in whose temperaments there has been a judicious blend of the optimist and the kicker. And if it comes to that a frank, out and out, pessimist, who works and hopes for better things to come, is a nobler specimen than your blind and supine optimist.

Optimism is the ideal state so long as you retain a reasonable and wholesome amount of dissatisfaction, so long as you do not neglect the eternal duty to fight, and fight hard and ever, against the wrongs which still hurt mankind and civilization. The right kind of man, in short, is your practical optimist; and when such an optimist is, all the time he is maintaining such a temperament, grievously suffering physical ills, it appears to us high Olympus has been scaled. It is to that kind of an optimist we here introduce the reader.

Mr. Charles Cristadoro is indeed already well known to the readers of THE GAZETTE, by reason of the superb articles by him which have, from time to time, appeared in our columns. One of these articles appears in this issue. And between the lines one easily can get the spirit and, if need be, the lesson, of practical optimism. Mr. Cristadoro has stated the fundamental principles of this club to be as follows:

"There is a rational optimism which even the most inveterate pessimists—'knockers,' colloquially speaking—should be glad to encourage, based on the belief that the world is growing better and that evil is retreating before the progress of science, intelligence and justice. An optimism which works and corrects, which studies history and human nature and which is prepared to demonstrate to any doubters that life is and always has been worth living and seeks to inspire men with enthusiasm and courage. Progress is not a delusion, but a fact. The world is growing better every day."

When he set down these principles, now more than a year ago, Mr. Cristadoro wrote that his club was in good working order, although, so far, with but a single individual member, who is the president, vice-president, treasurer, secretary and board of directors. The club lives in hopes that the membership may be increased. No initiation fees or physical gymnastics and annual dues are required and no hold-up quets are given.

Mr. Cristadoro at that time urged every citizen of San Diego to join, even the school children to become active members, to be optimistic, day by day. "The motto of the Point Loma Optimist Club is, *What can you do?* We don't care much to hear what you have done or may do in the future for San Diego, some day, but what can you do for San Diego now, to-day, and what can you do and keep on doing for the good of San Diego on each and every one of its 365 sunshiny, balmy days in the year.

The point here is, wouldn't it be a good idea for every reader of Mr. Cristadoro's superb philosophy to substitute for San Diego, the name of his own home hamlet, or town, or burg?

In exemplification of practical optimism we make here some excerpts from Mr. Cristadoro's writings—real literature:—

"Do you remember seeing a reprint of a painting by Kraus, I think, of an old and kindly village cobbler carefully studying a pair of 'worn to a frazzle' shoes, the owner looking on with equal concern? To apply the simile: The only thing I can honestly plead guilty of is schooling myself into a constant condition of occupation when conditions improved to permit of it. And that the cause was a sensible one and that because of the consequent extrospection I mended to a certain extent, and was able to remain on this earth and keep going. In other words I lived along from day to day because I managed to live out of myself. Injecting a little good humor and optimism into the situation I made matters just a little more pleasant for those around me and incidentally, for myself. So that, really, is all there is to it. Beyond that I cannot see anything worthy of notice, either along the lines of 'pointing a moral or adorning a tale.' There isn't an appreciative soul who enters my sun and wind-modified lath-house but who, as it were, envies me despite all my trials and tribulations. I wish every man who wielded a pen could have such a retreat. The breathing, exhalation of the blooms and the surrounding bird chorus are the only 'distractions,' if they can be so called instead of inspirations. So, could you jump into your (prospective) 500 miles-per-hour aeroplane and point it towards the Mexican border and stop just short of it at Pt. Loma, *this* would be the spot. Could I do so, I would like to share it with all. As it is I am inclined to think that it must be enlarged, for, when a dozen people crowd in at a time it looks like a case of standing room next year, if all the friends who *promise* to come do come. More and more come as it is, the case of a 'trail in the wilderness.' 99 44/100 per cent. strangers.

"Last Saturday we had the usual anniversary of June 6, 1910 when they rolled me off alive and not dead from the operating table.

"My life is a peculiar one. I spend the day in an invalid's chair, in a lath-house in the garden. At 6 p. m. I go to my bed more or less exhausted, and am asleep at 7 p. m. My 'sleep is out' at 1 a. m. when I sit up in bed and write until 7 a. m. Then nursing, and again in the lath-house at 8 a. m. and breakfast, mail at 8:30 and busy for the rest of the day. Rather long hours, but keeping busy every moment prevents, an invalid's worst enemy, introspection.

"The Doctor says I am able to stand a *boat trip* to San Francisco, and that it will do me good! Think of what that means to me after nearly ten years in an invalid's chair! To see a 'movie picture show' and a score of other won-der-ful sights! Like a child going to the circus!!

"I would like to recite many most interesting experiences, e.g.: Little Mexican school children singing, and 'saluting the flag.' And the papers full of war talk against Mexico. Their fathers are across into our line, industriously at work under our flag. Straight haired, dusky faced, *luminous*-eyed children and very intelligent looking. No peonage for these boys when they grow up. They may go back to Mexico and lead along bettering ways. Curious how intently they watched me and listened to me talk. And quick to respond to any amusing sallies I might make.

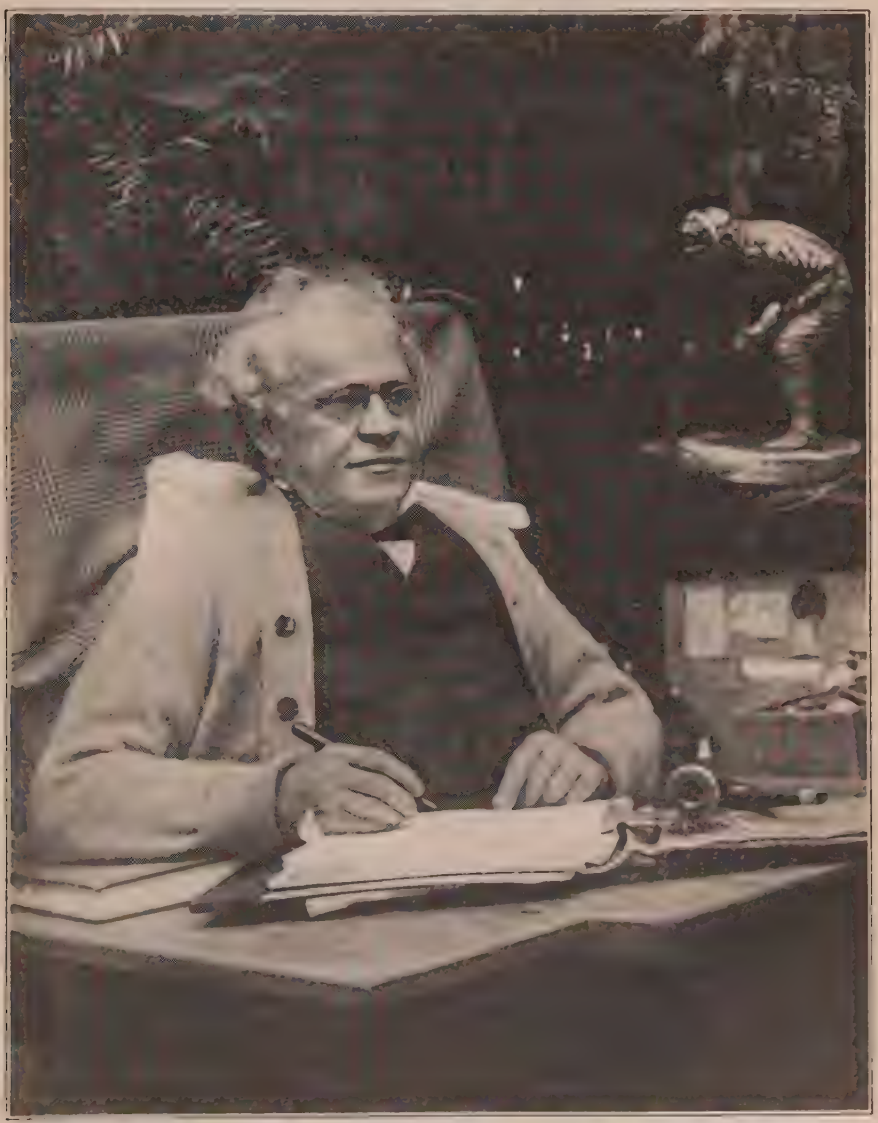
"High school at National City (5 miles from San Diego), built in mission style, cloisters, tiles, etc., etc., but inside modern in every way, an up-to-the-minute school. The studied attention given my talk pleases me very much indeed—and they insist on 'more' when I show an inclination to quit.

"The superintendent has 450 schools in the county and he has asked me for a few little essays or stories, 200 words each, to pass through the schools. I lightly treat commonplace things, natural history, hygiene, food, etc., on an understandable, yet interesting plane, my object being to excite interest and make the children hunt up for more information in the encyclopedia—and write compositions on my essays.

"I get much pleasure writing these little screeds, they fill gaps in my work, have already sent in 50 and presume I may send them 100 or 200 if opportunities present.

"I know my writings are, at best, crude and unpolished, (*sic*) spontaneous, and I cannot and do not keep them for days to mall over and shift and change and, like rice, polish them up—and, to my way of thinking, harm them, as is done when, to polish rice, they rub off the valuable protein that adheres to the exterior and gives the cereal a brown appearance and which 'to please the eye' is wastefully abraded.

"However, the sentiment is here and that really is what counts. A good thought expressed, even in misspelled words, is better than a worthless sentiment beautifully expressed. No ripple of permanence is left to the reader."



CHARLES CRISTADORO

A MODERN LULLABY.

(New York Evening Sun)

ROCK-A-BYE, baby, upon the bough,
You get your milk from a certified cow!

Before your eugenic young parents were wed
They had decided how you should be fed.

Hush-a-bye, baby, on the tree-top,
If grandmother trots you, you tell her to stop.

Shun the trot-horse that your grandmother rides—
It will work harm to your little insides.

Mamma's scientific—she knows all the laws—
She kisses her darling through carbolized gauze.
Rock-a-bye baby; don't wriggle and squirm;
Nothing is near you that looks like a germ.

"LINES UPON READING A GARDEN ANNUAL"

by Mildred Howells, in *Scribner's*:

WHAT do I care if snows drift deep
And chill the north wind blows,
When, in the sheltered room I keep,
A glorious garden grows?

Free-flowering Ramblers climb and cling
Immune from Bug and Blight,
While from the floor Show Pansies spring,
As big as saucers, quite.

Larkspurs and Phlox their standards rear
So thick with flowers no room
Is left for leaves, and through the year
Display Continuous Bloom.

Exotic Ferns and Orchids Rare
Grow rankly all about,
Thriving the Better without Care,
Indifferent to the drought.

So why revile grim winter's rage
When summer fails to show
Such flowers as those the Seedman's page
And boundless fancy know?

HINTS FOR BOYS.

(To do what they want to when they want to do it)

TACT.

When your father has a headache you should always bang the door;
If your mother's feeling giddy you should stamp upon the floor;
Yell and whistle as you run—it is really ripping fun,
And discourages your elders when they tend to be a bore.

ON GETTING UP.

When the matutinal knock
Comes to rouse you from repose,
Quite regardless of the clock
Turn and take another doze.
Should your relatives complain
Do not let it give you pain;
Never mind if breakfast's late,
It will do them good to wait.

DEPORTMENT.

How provoking is the mat
Lying by the entrance door!
Mud abounds, but what of that?
Carpets cover every floor.
Walk exactly where you please
(Manners should have perfect ease),
Asking, when your parents tease,
"What are rags and carpets for?"

—ROSAMUND MARRIOTT WATSON, in *Harper's Monthly*.

"THE EVENING COOL"

By the Bentztown Bard in the Baltimore *Sun*:

O tired day, the evening cool
Lies round you like a limpid pool.
And over it the fresh winds bring
The breath of wind refreshening;
The nesting birds one last chirp sound,
The little insects beat the ground
With footsteps like the tap of rain—
Miss Night is at the window-pane!

. . . . . .

Dear earth, how deep must be thy joys
In evening cool, when on thy ears
The laughter of the little noise
Of night comes down the grove of years.
Of little fledglings going to rest,
The chatter over every nest
As there by Nature's cradle stands
Miss Night, with poppies in her hands!

BOOKS

CIVILIZATION HAS IMPROVED SOME.

Most men vaguely remember Prince Henry the Navigator in connection with the burst of exploratory zeal which led to the discovery of America, and as the man mainly responsible for the enormous ebullition of colonizing energy which raised Portugal, for the time being, to the foremost position in Europe. The detailed outlines of his life were some time ago recorded by J. P. Oliviera Martins, an historian of Lisbon, whose book is now translated by J. J. Abraham and W. E. Reynolds, under the title of "The Golden Age of Prince Henry the Navigator" (Dutton). Martins's work is rightly described as giving a glimpse "of the color and movement of the fifteenth century, when Moslem and Christian fought fiercely for dominance in Europe, when grim mediæval barbarism mixed and mingled with the pomp and circumstance of knightly chivalry, with childlike Christian piety and budding transcendentalism, which makes it read more like a cunningly devised historical romance than history." The picture it renders of the Prince is, as compared with the works of Major and Beazley, distinctly favorable. But the author does not forget that his ambitions to make North Africa a new Portugal were preposterously mistaken, and led to the ultimate undoing of his country. "It was one thing to subject the ocean and establish fortifications along the shores of countries inhabited by more or less divided and ineffective populations—this was what a mere handful of Portuguese tried to accomplish in the East. It was quite another thing to establish a stable empire in these regions, to populate them with vigorous, thrifty people, and to bless them with a living proselytizing faith. To suppress the Arab or Moor, to usurp their dominions, the Portuguese required a large, better-populated fatherland." Of the character of the Prince it can only be said that it was consonant with the age.

It was he who, hoping to stimulate conquest by desire for gain, inspired the first slave-raid by a Christian nation in history, and set up the first slave market on the beach at Lagos, Portugal. The captives, about 1,444, had been rounded up from the African coast south of Cape Blanco; not without cruelty. They numbered about 250, one-fifth of whom belonged to the Prince. They were, as a chronicler of the time puts it, regarded as a gift from "Our Lord God, who always rewards the upright, and wished duly to recompense the Portuguese for all the labor they had given in his service." On horseback Prince Henry rode along the beach, superintending the landing and division of his plunder; while the fields about were crowded with Portuguese spectators. The slaves huddled together in dazed attitudes of apprehension. "Among them," to quote the mediæval chronicler again, "were some more white than others, handsome and of promising aspect. Others were almost brown. Others again were as black as ebony, and as hideous as Ethiopians both in face and body. Some were overburdened with grief, and their faces were wet with tears; others cried loudly in their affliction, gazing toward the skies, shouting as if imploring Nature to come to their aid; others covered their faces with their hands, and threw themselves prostrate on the ground; while others again voiced their tribulation in weird chants." Prince Henry was totally unmoved. To him their souls were as black as their skins. "He began to portion them with the idea of equalizing the commercial value of each lot; and when he thought it expedient to separate fathers and sons, wives and husbands, he respected no family ties; they were grouped merely according to the laws of his discretion." He even exchanged captives from one lot for those of another, so as not to discontent the owners of the lots, doing it with a callous cruelty. Thus it would often happen that subdued grief would suddenly assume the proportions of an explosive chorus of despair, when they saw that "the father was taken to Lagos, the mother was dragged to Lisbon, and the sons to other parts."

NUGGETS.

From *Primitive Psycho-Therapy and Quackery* by Robert M. Lawrence, M.D. (Houghton Mifflin Co., Boston).

A written medical prescription of to-day, after having been filled and copied by a druggist, is usually considered to have fulfilled its mission, but the annals of popular medicine afford ample evidence of the narrowness of such a view. The practice of swallowing the paper whereon a recipe is written, as a veritable charm-formula, is of great antiquity, and is still in vogue in many lands. The idea involved in this singular custom is of course a superstitious regard for writing as a magical curative.

Among various African tribes written spells, called *saphies,* are commonly used as medicines by the native wizards, who write a prayer on a piece of wood, wash it off with water, and cause the patient to drink the solution. Mungo Park, while in West Africa was once asked by his landlord, a Bambarra native, to prepare such a charm; the latter proffering his writing-board for the purpose. The traveler complied, and the negro, whilst repeating a prayer, washed the writing off with water, drank the mixture, and then licked the board dry, in his anxiety to derive the greatest possible benefit from the writing.

Lucan, the Roman poet, declared that even the world might be made to stand still by means of a suitable incantation, thus voicing the popular belief of his time in the miraculous power of words.

So great was the interest aroused by Mesmer's methods and the many seemingly marvelous cures resulting therefrom, that the Royal Society of Paris appointed a commission, which included Benjamin Franklin, to investigate the subject. This commission reported that those patients who were not aware of the fact that they were being magnetized experienced no effects from the treatment. Those who were told that they were being magnetized experienced symptoms, although the magnetizer was not near them. Imagination, apart from magnetism, produced marked effects, whilst magnetism, without imagination, produced nothing. The benefits resulting from Mesmer's treatment were due, according to the commission's report, to three factors, namely: (1) actual contact; (2) the excitement of the imagination; (3) the mechanical imitation which impels us to repeat that which strikes our senses.

The ability to cure disease without the use of medicines or surgical appliances has been claimed by alleged healers in all ages. When such cures were effected, they were attributed to a special gift with which the healer was divinely endowed, and this gift was bestowed, in rare instances, upon individuals distinguished by especial sanctity.

Mummy dust was prescribed by English physicians as late as during the reign of Charles II., to promote longevity; they reasoned that inasmuch as pulverized mummy had lasted a long time, it might, when assimilated by their patients, assist the latter to do likewise.

The wicked may enter on the practice of psychotherapy; but the subconscious mind will reject their evil suggestion. In the hypnotic state the real bent of the normal mind and personality is more ready to follow the good and reject the bad suggestion than in the normal, conscious state. Instinctive morality comes to the aid of the genuine psycho-therapist, and refuses its co-operation to the counterfeit.

From Manalive by Gilbert K. Chesterton.

A WIND sprang high in the west like a wave of unreasonable happiness, and tore eastward across England, trailing with it the frosty scent of forests and the cold intoxication of the sea. In a million holes and corners it refreshed a man like a flagon, and astonished him like a blow. In the inmost chambers of intricate and embowered houses it woke like a domestic explosion, littering a floor with rare professor's papers, till they seemed as precious as a fugitive; or blowing out the candle by which a boy read "Treasure Island" and wrapping him in roaring dark. But everywhere it brought drama into undramatic lives, and carried the trump of crisis across

the world. Many a harassed mother in a mean backyard had looked at five dwarfish shirts on a clothes line as at some small, sick tragedy; it was as if she had hanged her five children. The wind came and they were full and kicking, as if five fat imps had sprung into them; and far down in her oppressed subconsciousness she half remembered those coarse comedies of her father's when the elves still dwelt in the bones of men. Many an unnoticed girl in a dark, walled garden had tossed herself into the hammock with the same intolerant gesture with which she might have tossed herself into the Thames; and that wind rent the wavering wall of woods and lifted the hammock like a balloon and showed her shapes of faint clouds far beyond, and pictures of bright villages far below, as if she rode heaven in a fairy boat. Many a dusty clerk or curate plodding a telescopic road of poplars thought for the hundredth time that they were like the plumes of a hearse, when this invisible energy caught and swung and clashed them round his head, like a wreath or salutation of seraphic wings. There was in it something more inspired or authoritative even than the old wind of the proverb; for this was the good wind that blows nobody harm.

From The Life of the Fly, by J. H. Fabre (Dodd, Mead & Co.).

Laboratories are being founded, at great expense, on our Atlantic and Mediterranean Coasts, where people cut up small sea-animals, of but meagre interest to us; they spend a fortune on powerful microscopes, delicate dissecting instruments, engines of capture, boats, fishing crews, aquariums, to find out how the yolk of an Anneldi's egg is constructed, a question whereof I have never been able to grasp the full importance, and they scorn a little land animal, which lies in constant touch with us, which provides universal psychology with documents of inestimable value, which too often threatens the public wealth by threatening our crops. When shall we have an entomological laboratory for the study, not of the dead insect, steeped in alcohol, but of the living insect; a laboratory having for its object the instinct, the habits, the manner of living, the work, the struggles, the propagation of that little world, with which agriculture and philosophy have most seriously to reckon?

To know thoroughly the history of the destroyer of our vines might perhaps be more important than to know how this or that nerve-fibre of a barnacle ends; to establish by experiment the line of demarcation between intellect and instinct; to prove, by comparing facts in the zoological progression, whether human reason be an irreducible faculty or not; all this ought surely to take precedence of the number of joints in a Crustacean's antenna. These enormous questions would need an army of workers; and we have not one. The fashion is all for the Malluse and the Zoophytes. The depths of the sea are explored with many drag-nets; the soil which we tread is consistently disregarded. Whilst waiting for the fashion to change I open my harmas laboratory of living entomology; and this laboratory shall not cost the ratepayers one farthing.

Dietetics, or Food in Health and Disease, by Wm. Tibbles, Medical Officer of Health, Fellow of the Royal Institute of Health, etc., etc. Published by Lea and Febiger, Philadelphia and New York. $4.00.

In this volume Mr. Tibbles (who, being an Englishman of note, has a whole alphabet of titles, all of them assuredly well earned, after his name), deals with food in health and disease and applies well the theory and principles of dietetics to the many conditions and circumstances of life. And this book, together with the author's previous work on Foods; Their Origin, Composition and Manufacture, forms a complete system of dietetics.

Mr. Tibbles is pre-eminently fitted for the task he has here well performed, having for many years made dietetics his special study. And the practical application of the matter in this book should benefit vastly the physician's patients when they are sick, and should indeed prevent a great deal of sickness. The work is certainly most exhaustive and after principles are stated, their application is shown in diseases of the lungs, nervous system, stomach, intestines, skin, heart, liver, kidneys, and of the various glandular organs; in gout and rheumatism, obesity, diabetes, fevers and tuberculosis. The chapter on intamines and the deficiency diseases is especially important.

THE MENTAL HEALTH OF THE SCHOOL CHILD, THE PSYCHO.—Educational Clinic in Relation to Child Welfare; Contributions to a New Science of Orthophrenics and Orthosomatics. By J. E. Wallace Wallin, Ph.D., Professor of Clinical Psychology and Director of Psycho—Educational Clinic, School of Education, University of Pittsburgh, etc. $2.00. Yale University Press, New Haven, Humphrey Mulford, London, Oxford University Press, 1914.

Dr. Wallin has most fittingly dedicated his fine book to Professor S. Stanley Hall, the Founder of the Modern Child Study Movement. It has long been held that many of the most vexatious problems in our social economy are somewhat bound up with the mental and educational abnormalities of childhood. Wherefore many will welcome a volume, such as Dr. Wallin offers us, which demonstrates a deep appreciation into the nature, extent and causes of the mental, moral and educational arrest, deviation or deficiency of children, and in which will be found the aid which practical psychology can give in the diagnosis, identification, study and training of feeble-minded, backward and mentally abnormal school children. In Wallin's valuable book will be found discussions of Medical and Psychological Inspection of School Children; The new Clinical Psychology and the Psychoclinist; Human Efficiency; The Binet-Simon graded tests of intelligence; Psychoclinical norms and scales of development; The euthenical and eugenical aspects of infant and child orthogenesis; Experimental oral orthogenics; The effects of Dental Treatment on Mental Efficiency; the relation of oral hygiene to efficient mentation in backward children; Measurement of the orthophrenic effects of the removal of physical handicaps; Efficiency in school organization; The conservation of the mental health of children; A scheme for the clinical study of mentally and educationally unusual children. The book is admirably indexed.

A MANUAL OF PRACTICAL HYGIENE for students, physicians and health officers, by Charles Harrington, M.D., late Professor of Hygiene in the Medical School of Harvard University; fifth edition, Revised and Enlarged, by Mark Wyman Richardson, M.D., Secretary to the State Board of Health of Massachusetts. Illustrated with 24 plates in colors and monochrome and 121 engravings. Lea and Febiger, Philadelphia and New York, 1914. $5.00.

The late Dr. Harrington was one of the very ablest among the workers in the comparatively new science which has, since its beginning in the modern sense, about a generation ago, been so pregnant with beneficence for humankind. And his book demonstrated his great abilities and influence. Of recent years it has been evident to many that the science to which he devoted the best years of his life has grown beyond individual scope. Wherefore, Dr. Richardson, in preparing this fifth edition of Dr. Harrington's work, has associated with him in his revision the experts associated with him in the Massachusetts State Board of Health, the first such board to be established in America and a board unexcelled to-day for the high character of its laboratory investigations and of its public health administration. Thus revised line by line, this fifth edition reveals the subjects of personal and public hygiene in their latest developments. It will certainly answer the requirements of all those interested in the most vital of human considerations—the individual and the communal health.

COLLECTED PAPERS FROM THE RESEARCH LABORATORY OF PARKE, DAVIS & CO., Detroit, Mich. Reprints—Vol. 2, 1914. Physicians will find in this book technical and scientific papers on Hog Cholera. The Treponema Pallidum, The Bacillus Bronchisepticus, The Drug Influence on Extrasystoles, Protective Enzymes of the Blood as a Means of Extracorporeal Diagnosis, Adrenalin in the Treatment of Asthma, The Treatment of Tetanus, etc.

THE REPORT FROM THE PHYSIOLOGICAL DEPARTMENT AND THE DEPARTMENT OF CLINICAL PSYCHIATRY, Central Indiana Hospital for Insane, Indianapolis, Ind. Vol. V. Physicians will certainly be interested in these most scientific reports. Especially worthy of note is the programme of lectures to be delivered by able physicians on Mental Pathology and on Mental and Nervous Diseases.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M.D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

THE SHORTAGE OF PUPIL NURSES.

EVERY discussion of the shortage of nurses and the remedy for the same is well worth our consideration, because, if reports are reliable, the condition appears to be growing more acute. We do not intend to enter into a full discussion of the situation, but we wish to review a very suggestive article in the *American Journal of Nursing*, by Miss Mary M. Riddle, R.N., whose high rank in the nursing world entitles her to speak with authority.

Concerning the various causes of this "alleged shortage," Miss Riddle believes that it is hardly right to ascribe too large a share of the responsibility to the raising of educational standards for entrance to the nursing schools. She affirms that there is no particular evidence of a shortage "in those schools which give value received to the pupil nurses for the services rendered the hospital." Pupils are likely to go where they can "get the most for their time and money." Naturally, a wholesome competition among schools, on this basis, ought to attract more pupils. These arguments are perfectly sound and should be taken by many of our hospitals as a rebuke for their policy of overworking and undertraining their pupils.

In defending the long course, which is evidently synonymous in her mind with the "best" course she makes this assertion:

> Everybody agrees that we need the best nurses that can be trained; the public and the physicians demand the best, notwithstanding the fact that they sometimes reason to the contrary. It has for a long time been noticeable that the advocates of the untrained nurse, or the one less trained, have usually urged her services upon others, she has not been considered suitable for them, their patients, their families, or their friends.

And in another place she says:

> If the medical profession and the sick public want Sairy Gamps and Betsey Prigs, perhaps they ought to be allowed to have them. Also if it can be proved that nurses qualifying through the much-advocated shorter course can better meet the demands, why, surely, let us adopt it.

It is unfortunate that Miss Riddle should mar an otherwise excellent presentation of the matter by taking a fling at the "medical profession and the sick public," as if neither the doctor nor his patient cared anything for good nursing. The author certainly must know that this is an economic question, and not a question whether or no the "sick public" and the medical profession shall stand for the long course of nurse training. Whatever may be the idea of the sick man with reference to the nursing curriculum, he hires the nurse that he can afford to pay. Does Miss Riddle presume to ridicule him for his desire to live within his means, whether well or ill? She might as well say that if the "sick public" want cottages instead of mansions, lamb chops instead of squab, or water instead of champagne, "perhaps they ought to be allowed to have them." Certainly the well-to-do have usually been quite generous in conceding to the poor their time-honored privilege of living in poverty. Before a representative trained and registered nurse presumes to taunt the "sick public" or their physicians with employing second-rate nurses, she should show the people where they can employ trained nurses for $8.00 or $10.00, or even $15.00 per week. Probably Miss Riddle would not advise graduate nurses to do private nursing at these low rates. Neither do we.

Whom, then, is the "sick public" likely to get in the capacity of nurse? Naturally, some one "qualifying through the much-advocated shorter course," or some one worse. Would it not be a neighborly service for the nursing profession to encourage the short course and try to help their humbler sisters in preparation for their work, in order that the poor man may get his money's worth when he pays his precious $10.00 for a nurse?

It is perfectly plain to everybody, except the worshipful "leaders," that the "sick public" must have two, or more, grades of nurses from whom to select those who are economically possible in his emergency. If

it is advisable to train the graduate nurse three or four years, it is equally advisable to train the helpers, the non-graduate nurses, for as long a time as possible; and those who know how to do it ought to begin doing it *now*. For several years the correspondence schools have done quite a business in this line—and what honest person can blame them for it? The trained nurses have always met the correspondence schools with plenty of opposition, but never with *competition*. These schools must give good courses, for they do not complain of a "shortage of pupils!"

Two very good arguments are presented in favor of high educational standards:

The superintendent and teacher of nurses is rare who has not sometime been almost overcome by the wave of discouragement sweeping over her at the knowledge that some pupil (graduated from her school), has failed of the greatest measure of success, perchance in the care of a patient in private duty. She knows she did her best with the material in hand and resolves to be more careful in her selection of future pupils. She knows the failure to be due to lack of understanding of the amenities of life or possibly to an ignorance that could not have existed if her nurse had been better educated to start with.

Again, barring an occasional exception and all other things being equal, she knows that when the stress comes and there must be an unusual exertion made to meet a crisis, whether in public or private work she can best depend upon the woman of broad and liberal education for it. This may be owing to the fact that the broad education has enabled the nurse to get the different points of view and harmonize her course to meet the situation. Moreover, experience has taught us that it is the nurse of broad education who has the least to say about the menial duties of her profession. She is above it because she knows there can be nothing menial in rendering professional service to the sick who are in her care, while the untrained nurse, unless she be actuated by the highest religious motives, is unable to grasp the full significance of the value of her work, or its possibilities. These are two pleas for maintaining the educational standards and they are vital ones, even though they should cause a shortage of nurses.

This is all very true, but let the educated nurse remember, again, that it is the size of her fee and not the length of her schooling that will determine her availability to the great mass of our people. Many a well-educated nurse is sitting idle in her room at this minute, while the work that she would be delighted to do is being performed very imperfectly by women unworthy to be called nurses. It is an economic question, and some people are experiencing hard times.

There is, however, one phase of the shortage in the nursing situation that somewhat alarms the people who are ever thoughtful for the welfare of the sick, viz., the very evident falling off in the number of the best qualified nurses who are willing to do private duty. A glance at the great new body of public health nurses would do something toward convincing one of this fact. Consider its size, its enthusiasm, its enterprise and its personnel and conclude that a great draft has been made upon the private nursing body to form it.

Why is it that many trained nurses are taking public health positions at $60.00 per month and paying for their living, when they would refuse to do private nursing at $15.00 per week, with board and room thrown in? Probably the regularity of the monthly salary, with no uncertain periods of idleness, and the freedom from responsibility during the evenings and Sundays, make public health work attractive to the nurse who has been a slave several years to the exacting demands of private nursing. Whatever the motive, it is true, as the author observes, that many of the most capable nurses are going into these salaried positions; and for every nurse so employed there are, perhaps, five others on the waiting list and ready to accept appointments.

If any nurses have need of education and intelligence, surely those in the public health services will find these needs imperative. They need the best of training in order to fill acceptably some of the responsible stations offered them in the health departments of our states and cities. At the other end of the list is the nurse who must be willing to undertake the care of her patient and attend to the wants of the family at the same time—combining domestic services with the simplest forms of service in the sick room. While her position in the world is humbler than that of her trained colleague, she is none the less essential to the community, and she should have all the training that our wiser sisters can devise means of giving her. We have always said this, and we repeat it again. Sometime the trained nurse will accept as her appropriate function the instruction and guidance of her untrained—but not unworthy—sister.

The trained nurse is too apt to show her petulance toward the medical profession and the "sick public" when they allow the non-graduate to minister to their needs. Such an attitude is childish, and does not advance the cause of the educated lady who maintains it. If there were to-day no nurses who would work for half the fees received by the graduate nurse, the public would demand such nurses and would get them in some way, in spite of all laws. This is an economic question. Where a demand exists there must be a corresponding supply—unless the demand can be killed.

A TRAINED NURSE DOES GOOD MEDICAL WORK.

MISSION fields offer the nurse opportunities and responsibilities that would be quite impossible in a land where medical practice and nursing laws cover every nook and corner of the field. The *Missionary Herald* gives this appreciative notice of the work of a missionary nurse at Davao, Philippine Islands:

"The medical work, despite the absence of Dr. Sibley on furlough, has been carried forward under the direction of Miss Mary R. Mathewson, the trained nurse. There were 13,000 treatments during the last year. Sixty leper suspects were gathered at Davao, but it was found they were really suffering from malignant tropical ulcers and in most wretched condition. They were nearly all from wild tribes. Miss Mathewson and her assistants took over their care in a separate location. Six were in such frightful condition as to be beyond help, and these six died; but the others were all sent home cured.

"A splendid new mission site has been secured on high ground outside Davao City. One residence has been completed, a second is soon to be begun, as also the mission hospital, which will thus be moved to a beautiful and healthful location. The new site will also provide room for a school later on for the wild tribes. The present hospital building may be used as a town dispensary."

NEEDLE TRANSFIXING THE STOMACH WALL.

ONLY two cases are to be found on record where a needle has protruded through the wall of the stomach; one was reported about six years ago in England, and the case referred to below was reported in the *Medical Record,* by Dr. Oliver C. Smith, of Hartford, Conn.

The patient was a married woman, 37 years old, somewhat neurasthenic, who had recently recovered from a serious abdominal operation.

A bismuth skiagram taken by Dr. Arthur C. Heublein revealed a normal stomach in size and contour, but showed clearly a foreign body, pin or needle, protruding 1½ cm. through the anterior stomach wall at a point 3½ cm. proximal to the pylorus on the lesser curvature. A second skiagram was taken two days later just prior to operation confirming the findings of the first.

Operation at the Hartford Hospital, October 2d, under gas-oxygen-ether anesthesia. The stomach was exposed and the pointed end of the needle, dark but not corroded, was found protruding through the wall of the stomach in the peritoneal cavity at a point corresponding to the appearance in the skiagram. The needle was drawn out of the wall of the stomach by forceps, breaking immediately after its removal, the portion of the needle lying within the cavity of the stomach being extensively corroded. The small opening in the stomach wall was closed with two purse-string sutures and the wall of the abdomen was closed without drainage. The stomach regained its normal function within a few days, and the patient rapidly regained her lost weight.

The patient had probably carried the needle in her stomach for over two months. The case illustrates nicely the wonderful value of the X-rays in revealing conditions that would otherwise be hidden. Occasionally we find a "sure thing" in modern medical practice.

DISTINCTION BETWEEN "TUBERCULOUS" AND "TUBERCULAR."

THERE is a great deal of confusion among medical men as well as laymen in the use of these two words. A correspondent of the *Journal of the American Medical Association* asks for the proper distinction between the terms, and we are glad to give the reply in the words of the Journal:

Careful writers apply the term "tubercular" to lesions characterized by the presence of nodes or tubercles, whether caused by the tubercle bacillus or by any other agent; and "tuberculous" to lesions produced by the *Bacillus tuberculosis* or to conditions associated in one degree or another with tuberculosis. That is to say, the word "tubercular" applies to the external form of a lesion; the word "tuberculous," to the cause, actual or possible, of a lesion or a condition. Thus, tubercular leprosy, caused by the *Bacillus leprae,* is so called because of the nodular character of the lesions, while tuberculous pleurisy is so called because produced by the tubercle bacillus. A "tuberculous diathesis" is a predisposition toward tuberculosis; the tubercle bacillus, whether capable of being demonstrated or not, is regarded as a factor, potential or operative, in the condition.

As most of us have occasion to use these words only in reference to tuberculosis, we can afford to discard the word "tubercular" and stick to the other word all the time.

DOGGING THE HEALTH COMMISSIONER.

New York City has a muzzling law which became effective in September. We append a brief statement from the *Weekly Bulletin,* with a few of the letters received by the Commissioner of Health, Dr. S. S. Goldwater:

Since the adoption of the muzzling ordinance, the Department has been flooded with letters from interested citizens, an overwhelming majority of whom have commended the action of the Department, while a few, holding contrary views, have expressed themselves in opposition. Extracts from the letters received are here presented, showing the divergent views of citizens. It will be noticed that the antediluvian Ostrich Party, whose platform declares that there is no such thing as rabies, still has a few scattering supporters.

"Your recent order that all dogs, whether in leash or not, in the public streets, public buildings, apartment houses, etc., must be muzzled, is certainly a step in the right direction and worthy of the highest commendation by all fair-minded citizens of this great City. S. D. H."

"At last we have some one in power with courage enough and common sense backed by intelligence to try to remove dogs from New York. Why should we stand all this barking, smell, howling, etc., besides danger to health and morals is more than I could ever comprehend. Please continue on those lines. E. C. P."

"I agree with you that all *homeless* dogs in the streets should be destroyed, but when you say that dogs are filthy, you do not know what you are talking about. Don't forget that a dog is a man's best friend, and ever faithful and a protection. How long would you last in the late Mayor Gaynor's cabinet? We all worked for you to be made Commissioner and did not expect to see you act so inhuman. C. H."

"Apparently a number of our city folks have become indignant over the plan of not permitting unmuzzled dogs upon the streets. I cannot see that the muzzling of these animals will in any way torture or injure them, but it will on the other hand serve as a precaution against possible injury to little children. I have no dislike for dogs or any other animal, but my love for little children and my consideration of human beings is greater than for dogs. H. S."

"What is this country coming to in the twentieth century? There is no such thing as mad dogs or people being bitten, and even now it is the half starved mongrels who do the damage. No dog that is leashed goes mad.

"A Friend to Dumb Animals."

"God watches over all, and notes the fall of even a sparrow, and people who think they can treat animals in this life with impunity will be rather surprised at the accounting they will have to render to the Creator of all. E. C."

"Why maintain the Pasteur Institute? Why pay vast sums to specialists to study the germ of rabies? Put the dog like any other dangerous animal in the Zoological Garden and thus save the lives and health of our people, and stamp out *forever* the horror of hydrophobia. I have lavished love upon dogs, like many others, but am not blinded to the danger of the stray dog who lives upon decayed and germ covered garbage. Some of us will live to look back with horror upon the barbaric time when so many lives were sacrificed by the useless keepings of dogs. Mrs. E."

"Nearly three years ago my little son, five years old, was coasting on a hill in our neighborhood, Morris Heights, 177th street and Cedar avenue, when, entirely without provocation, a little fox terrier sprang at him and threw him in the snow, and, at each attempt he made to rise, biting him viciously about the face, hands, ears and arm. It was with great difficulty that the animal was at last driven off by a man with a shovel. It was the *well cared for pet* of one of our neighbors—not a stray dog. It was one year before the little fellow recovered his nerve. Mrs. A. C."

"Of what use are dogs in the city? Perhaps of no more good than to be at least one true friend to mankind, and that is more than one can say of the majority of the human animal, male or female. There is more harm than good done by muzzling a dog, and the only animal which should be muzzled or put on a leash is the animal called Man.

A Citizen of the Free Country."

"Surely an occasional rabid dog will not lead you to condemn the whole race any more than an occasional insane human leads us to ask what is the use of any of us. M. F."

"I am very much surprised to read that you approved of banishing dogs from cities. You may as well banish children. Dogs have been great companions and a lot of

comfort to many people in the world, and the bark of a dog has often warned the owner of danger. We have given you credit for many good things you have done, don't spoil it. R. H. L."

"Let me suggest what I think is the only solution to this matter. Have the Board of Aldermen pass an ordinance making it illegal to keep a dog in any house occupied by three or more families, with a penalty for violation of same, and give the Health Department power to enforce this ordinance. You would thus rid the city of 90 per cent. of its dogs. P. E."

"I entirely agree with you. If the superintendent of the A. S. P. C. A. had one death in his immediate family by hydrophobia he would feel differently about dogs. All the dogs in the world are not worth one human life. H. G."

"I want to thank you for the stand you have taken against the greatest nuisance in the city (dogs in apartments), and I hope you may enlist all the papers in the crusade. Aside from danger to health by contact, the microbes more numerous than from any other carrier, the nuisance on sidewalk, street cars and parks makes it a most timely crusade. I hope all doctors will aid you.

Dr. T. J. W."

HOW THE NURSE HELPS THE MILITARY CAMPAIGN.

THREE years ago, while addressing a body of Territorial Nurses, Lord Haldane, the British Secretary of State for War, made this prophecy which the nurses little thought would be so amply fulfilled in the year 1914:

Should the country ever be invaded, and the general hospitals mobilized, they will be the backbone of the Service, and we shall depend upon the nurses, with others, to keep up the strength of the force by sending back the fighting men to the front. In the old days, if a man were wounded he was out of that campaign. Now a very large percentage of men come back to the front, and that is due to the skill and science which nurses bring to bear upon the work of restoring them to health and strength.

DEATHS FROM MEASLES.

EVERY few months it is well to repeat the warnings of our health authorities against those contagious diseases that the public is prone to call "harmless". Measles is one of the diseases that is fearfully underrated in the popular mind, and the school nurse who keeps a suspicious eye on all cases of "colds" is too often considered fussy and even meddlesome. Yet the child who is snuffing and sneezing to-day may be infecting his mates with measles and may come out with a pronounced rash before the week is over. He ought to be sent home before he has a chance to infect others, even though it is impossible to prove that he has measles to-day.

Measles, far from being harmless, sometimes leaves the child with sequelae that disable him for life. As to the fatal cases, the Buffalo *Sanitary Bulletin* wisely observes that "a child dead from measles is just as dead as he would be from any other cause."

This warning from *American Medicine* is timely at any time:

The mortality from measles is so great that the medical profession should take immediate steps to disabuse the minds of mothers that the disease is so trivial that no pains need be taken to prevent their own children contracting it or giving it to others. The last census report shows that in the registration area it caused 7/10 of 1 per cent. of all deaths, or about ten per 100,000 of population. More recent estimates place the deaths at 1 per cent. of the total mortality from all causes, but if we include the cases reported as bronchitis, pneumonia or tuberculosis, it is safe to say that it causes much more than 1 per cent. and that the total yearly deaths in the country are 12,000 or more, mostly young children. The census report says: "Undoubtedly sufficient attention is not given by the health authorities and by the public to the restriction of this disease." We heartily concur in this opinion. Experience shows that the public needs instruction and that it complies with reasonable restrictions as soon as it learns the necessity. Laymen are not fools and will not intentionally kill their own offspring, nor will they deliberately murder other children. The deaths are more numerous in cities. The disease is now quarantinable in New York State and the restrictions upon school attendance should be much more rigid than the law requires. People must also be told that it is infectious even before the stage of eruption and perhaps as long as there are nasal discharges.

This item from the *Buffalo Sanitary Bulletin* may give some of our readers more patience with the exactions of our quarantine laws:

From several parts of the country reports indicate severe outbreaks of measles. To show how easily this disease spreads it is stated that a man who visited Kansas City caught the measles, went home telling his friends what a bad cold he had. In two weeks twenty-eight cases occurred where there had been contact with him. One of these twenty-eight went to another town. A child attending school caught the disease from him, forty-three families were infected, over ninety cases occurring. A visitor to the first village came home, attended the city school and over 100 cases occurred there. County examination of school teachers was held in the latter place and thirty more cases developed. There were over 300 cases directly traceable to this one man, with all the attendant doctor bills and other expenses.

Measles spread with the same ease and rapidity as a spark on a dry prairie.

GERMS.

By Ella Kaiser Carruth, Clinton, N. Y.

In this age of civilization
We have learned with consternation
That each human ill is due to some small
"bug."

We are told our one salvation
Is hygienic sanitation
Which is better than the best-known bottled
drug.

So we take to sterilization
Of the play-things of the nation
And no baby has a dirty doll to hug.

We don't trust to mere filtration
Of our daily liquid ration,
But we put it, boiled and harmless, in a jug.

When we go on our vacation
We refuse to leave the station
Without our private paper drinking-mug.

And the strictest regulation
In a home of education
Is that every one must help to fight the
"bug."

But in HIGHER education
There is no such regulation
As is seen in every hard-fought football tug.

If the player's respiration
Seems beyond all reparation
When they've been the luckless victims of a
"slug"—

Then there seems no hesitation
Without any reservation
To apply the same old sponge to EVERY
"mug".

HIGHER EDUCATION FOR NURSES.

By Mary E. Pennington, Niagara Falls, N. Y.

As a class nurse of only one year's standing, my ideas are of small value, I know. Nevertheless I should like to lay before you my opinion and what I believe to be the opinion of other girls with college educations who have taken up nursing, in regard to the question of a higher educational standard for nurses.

It seems to me that girls graduating from the different colleges could do no better, if they have the additional three years for scholastic work, than to take up nursing, not so much from a mercenary view, although that is a factor, but because it is a big field with a bigger future before it, has a wide scope of endeavor, and is a calling second to none.

Broadminded, conscientious, thinking nurses do not belittle those who have gone before them, nor those who are working in the same field to-day whose mental attainments do not reach their own, because they realize that these women have borne the brunt of nursing and have raised its stand-

ards from ignominy, induced by ignorance, to its present-day position. They can see that it remains for those of increased abilities to polish this diamond in the rough.

I have observed in the short time I have been in the nursing field, that the pupil nurse with a better education gets more from her training; she is able to see the smaller and finer points that are being taught, while her sister nurse is grasping essentials.

Not long ago it was my privilege to observe the treatment and care of a patient operated on for cancer. As the result of a consultation of three of the prominent surgeons of the state, an order was given to which the nurse protested. She stood in a most unprofessional attitude, spoke in a most unprofessional manner, saying: "Doctor, the patient can not take care of so much drug; her vitality is too low; she'll go out." The doctor speaking didn't seem much surprised, so, of course, I was forced to the conclusion that it was a common thing for him to be addressed in that manner by nurses. Now, that nurse was a graduate of one of our foremost hospitals, but her education was away below par. I like to think that if she were educated she would have been lady-like, at least.

To my mind, not until the hospitals establish a true standard of admittance and *adhere* to it, or take the other solution of admitting non-qualifying applicants as attendants, will the problem even approach a solving.

The present agitation and unrest in the profession has some portent. Usually agitation in other fields means progress. Let us hope it is so in our own.

NURSE TRAINING FOR COLORED YOUNG WOMEN.

THOSE who have become trained nurses in our schools prove that they are capable of mastering the profession to the extent at least of serving their own race with great devotion and efficiency. So that in the work of saving life their scientific training is a great boon to the Negro people. All of our higher institutions now make provision for this training as a great service to the race.

Founded twenty years ago for the purpose of affording colored women the nurse's training, the Provident Hospital of Chicago was then the only institution of its kind in the country, except the Government Hospital at Washington. Its endowment started from the pathetic bequest of an old colored woman who, dying, had just $50 to leave. Her direction was "Give it to two charities established for my people, one-half going to Provident Hospital."

The hospital has graduated more than 118 nurses and has now in training twenty-five colored women. It has cared for a total of more than 14,000 patients in the wards and 88,000 in the dispensary. Among these poor have been numbered people of all races. Asked if these colored women made efficient nurses, a competent critic replied:

"From the standpoints of order, dignity, and technical skill, the nursing force of this hospital seems to compare more than favorably with hospitals of the same size and class in other cities where the nursing service is composed of white women."

The Provident Hospital is distinctively a Negro enterprise.—*The American Missionary.*

OPEN-AIR HOSPITALS IN WAR-TIME.

By ROBERT SAUNDBY, M.D., F.R.C.P., Professor of Medicine, Birmingham University.

BUILDING committees have been in the past anxious to erect a structure which as they say should give those who subscribe to its cost something to look at and be proud of. Such sentiments have to my knowledge greatly influenced the builders of hospitals, and have been put forward as the justification for a good deal of not strictly necessary ornament. During the last twenty years we have been learning the lesson slowly, but it is sinking in deeply, that the usefulness of hospitals is almost in inverse proportion to their architectural merits, and that our exaggerated notion of "comfort" is in-

consistent with healthy surroundings. Draughts of air, low atmospheric temperature, dampness are not the disease-bearing agencies they were once supposed to be, while bad ventilation and equable, warm temperatures are depressing, debilitating, and retard recovery. Even dampness does no harm where there is a good current of air.

THE DANGERS OF ARTIFICIAL VENTILATION.

With the elaborate artificial system of ventilation introduced into the Birmingham General Hospital it was possible to maintain the wards and corridors at practically the same temperature day and night, and this was fixed at 60° F. as the recognized sick-room figure. But it was soon found that its very equability was a disadvantage, that those who had to work in these temperatures felt weakened, and within a few months after the building was opened for use the temperature of the corridors and that of wards at night was reduced to 55° F., the former figure of 60 degrees being retained for the wards by day. By degrees complaints were heard, not from those who had to work in these temperatures or on their own account, but by and on behalf of the patients, especially the surgical patients, and above all the children, complaints of delayed convalescence, of debility, and of retarded healing of wounds, results which would have been more seriously felt and less easily borne if it were not the case that the hospital has in the Jaffray branch a suburban dependency to which stationary cases can be transferred, thus relieving the beds of the parent institution. In spite of these advantages the complaints did not diminish and the need for fresh air was urgently felt. By many members of the staff the elaborate system of ventilation was regarded as worse than a failure, but as it provided the only means of heating the building it was endured, and other means of remedying the evils were sought.

THE BETTER WAY.

Fortunately the architects had provided balconies, more for ornament than utility, at the free ends of the wards, and to these balconies, enlarged in some cases by structural alterations, the patients are removed, being accommodated in long wicker chairs; but even so only a proportion of the patients can benefit by this treatment. A proposal to build large verandahs to each of the wards of the Jaffray Branch, to which access should be given by windows opening down to the ground, was, although supported by the medical staff, rejected by the committee on the grounds of structural difficulties and expense, and this highly desirable alteration still remains to be made.

AN OPEN-AIR WARD.

first attempt was made, although only on a small scale, to treat ordinary hospital patients in an open-air ward. The ward is on the roof of the hospital and is about half

It was at the Queen's Hospital that the covered in, but quite open to the south. It certainly did not look "comfortable," and seemed open to the objection of getting all the smoke as well as the rain and snow. After it had been in use for some time I visited it with the late Professor Foxwell, who had suggested its creation, and what surprised me most was that patients and nurses seemed to like it, and my fears that it would be regarded as "uncomfortable" received no kind of encouragement from those to whom I spoke. Moreover, I found that they were not surgical cases only, but in fact were chiefly medical, and in particular I was shown a case of pneumonia which was doing very well. I climbed down from that visit to the roof converted, not to the advantages of open-air treatment only, for of that I had been long convinced, but of the practicability of carrying it out even in the middle of a smoky city like Birmingham.

EXPOSED TO SUN, WIND AND WEATHER.

During the meeting of the British Medical Association in Liverpool in 1911, I had the pleasure of visiting the Country Hospital for Children, where, in a large ward quite open to the estuary of the Dee, I found something like 150 children of ages from two to ten or thereabouts. Their cots were placed close together and in three rows parallel with the long axis of the ward and to the open side. Here there was no question of floor space or cubic feet of air. They were in the fresh air, exposed to all the sun that shone on that shore, and to all the wind and weather that might befall. These children from the slums of Liverpool were suffering from all sorts of diseases, medical and surgical, and were under the care of Dr. Macalister and Mr. Robert Jones. They were presumably ill, but they did not look it. They had rosy cheeks for the most part, and their appearance testified most strikingly to the vivifying effect of open air. They were as unlike the ordinary inmates

of a children's hospital ward as it is possible to imagine. Why have we been slow to recognize that fresh air is the best tonic, the best antiseptic? It is cheaper, pleasanter, and undoubtedly more efficient than drugs. The successful treatment of tuberculosis in the open air led the way to the wider adoption of this method for other diseases. It was his observation of the results achieved by Dr. Huggard at Davos, whose advocacy of fresh air and courage and success in inducing his patients to discard their prejudices in favor of "warmth and comfort" were so remarkable, that inspired Dr. Foxwell with the wish to give the same plan a trial in the treatment of ordinary diseases at the Queen's Hospital. Yet the open-air treatment of consumption has been carried out for only some twenty-five years, although its value has been demonstrated by Mr. George Bodington, of Sutton Coldfield, and explained by him in his little book on "The Treatment of Pulmonary Consumption," published in 1840. Half a century had to pass away before the plan was revived, and this was not the direct result of Bodington's teaching; nor, we must regret to feel, was it due to the efforts or clear-sightedness of his own countrymen. The Warwickshire surgeon might know the truth, but his little lamp soon flickered out, and his contribution to the knowledge of his profession was forgotten, although when its value was proved by the work of Walther of Nordrach and others it received the belated honor of being included in the 173rd volume of the New Sydenham Society's reprinted monographs (1901).

THE AMERICAN CIVIL WAR RESULTS.

The experience of the American Civil War was all in favor of improvised hospitals or tents, but it preceded the enormous advance in surgical treatment due to Listerism, so that surgeons look back on those days with a shudder at results which were so poor, even where there was abundance of fresh air and sunlight, owing to the existing ignorance of the causes of wound infection. Yet those who took part in the medical and surgical work of the war had no doubts, and in the report of Surgeon-General Billings, in Circular 4 of the "Medical and Surgical History of the War," he says, speaking of hospital construction, *"The object to be kept in view is to furnish shelter without diminishing that supply of pure air and light which is necessary to health."* Other points, such as locality, exposure, plan of construction, modes of heating and ventilation—are only of importance in so far as they secure that object. Wiser words were never written, but it is doubtful whether their meaning and importance have been fully appreciated or allowed due weight when the question of hospital construction has arisen. We have learnt that life in the open air is not only possible but pleasant—that cold air is a tonic, as George Bodington maintained—that warm rooms are debilitating, and that a free supply of external air is not disagreeable, while a current of air that enters from ventilators or partly opened windows and other narrow openings causes draughts which, when they impinge upon the inmates, give rise to discomfort and complaint too often resulting in their being stopped up.

WHAT OPEN-AIR DOES IN WAR-TIME.

It is to be hoped that these principles may be borne in mind in the course of the arrangements that are being made and will have to be made in the provision for the sick and wounded during the present war. It is quite probable that the accommodation already made will prove insufficient. In the American Civil War and in the Franco-Prussian War the suitability of wooden buildings was abundantly proved, and with our increased knowledge and confidence in the advantages of simple structures it is to be hoped that no more money will be wasted upon structural alterations for hospital use, but that simple erections will be made, for which there are many good designs to be seen in the more recently erected sanatoria for the treatment of consumption, none being better than that recently opened at Little Bromwich, outside Birmingham. Even these in many respects may be simplified in accordance with the temporary use to which they will be put. Open wards dispense with all need for considering methods of heating and ventilation; windows and doors are not required, but it may be desirable in some places to have sliding wooden screens to afford a certain amount of protection in stormy weather. Flooring may be made of asphalt or simply beaten earth covered with a thick layer of pine sawdust, which can be renewed easily with a shovel and which absorbs all damp to an extraordinary extent. The late Professor George Vivian Poore demonstrated the great value of pine sawdust as an antiseptic absorbent and its special value for taking up and deodorising such liquids as urine. He was asked by the

South-Western Railway to suggest a simple form of urinal for the use of the men engaged in their works at Basingstoke, and he proposed the provision of a simple trough made by two planks put at an angle, filled with pine sawdust; when he was asked how often the sawdust would have to be renewed he said "Practically never." He was in the habit of showing his friends a flannel jelly-bag half full of sawdust which he and his assistant had used in his room at University College for six months as a urinal, the effluent from which in the whole of that time amounted to something less than a pint of a pale fluid which smelt only of turpentine.

THE PROPOSED TEMPORARY HOSPITALS.

If these hospitals are put up as is proposed in the grounds attached to buildings, or in unoccupied land in their neighborhood, there ought to be no difficulty about the disposal of fæces, which should be superficially buried in shallow trenches. Soiled dressings should be burnt, and a proper furnace connected with the sterilizing apparatus would be a necessary adjunct to the hospital. The University buildings at Bournebrook, Birmingham, have been transformed at very considerable expense into a hospital of 600 beds, but it is likely that many more will be needed. There is plenty of room for the erection of such an annex as I have in mind, and there would be no difficulty in Birmingham in forming a committee to provide the money and equipment and to superintend the provision of all that is needed for such an extension. The campaign in favor of fresh air and sunlight is also that of efficiency and economy, and where money may be the decisive factor in this great struggle, there can be no justification for wasting it, especially when better results may be obtained by cheaper methods.—*The Hospital.*

SURGEONS AND NURSES.

By a Fellow of the Royal College of Surgeons.

The adoption of antisepsis, and subsequently of asepsis, necessitated a very great advance in the training and education of nurses, and was simultaneous with the adoption of the nursing profession by educated ladies in the place of the Sairey Gamps and Betsy Prigs of the pre-Listerian era. Many of these women were as shrewd, as gentle, as conscientious, and in their way as skilled, as the best nurses of the present day; but they were of a very inferior social class, and though many of them performed admirably the duties that were expected of them, these duties were of a simple character, such as could be picked up by an intelligent woman by mere practice in the wards without special teaching or training; and few of the nurses of those days would have been capable of acquiring the high technical skill of the present-day nurse if it had been required of them. Nursing is now advanced to the dignity of a profession. It is true that we have heard a parvenue hostess apologise to her guests for asking them to sit down to table with a nurse, but this was an exposure, not of the inferior status of the nurse, but of the vulgarity and ignorance of the hostess. Educated and cultured ladies of gentle and of aristocratic birth, even princesses of royal houses, now see no degradation in learning the duties of a sick nurse, and in adopting nursing as a calling.

It is the more remarkable, therefore, that the treatment of nurses by some surgeons has undergone at the same time a change in the direction the very reverse of what might have been anticipated. Now that surgeons and nurses belong to the same social class, and that a surgeon may at any time meet in society, and at the table of common friends, the nurses who have had care of his patients and may have care of them again; now that marriages between surgeons and nurses take place every month, and are taken as a matter of course, there are some surgeons who treat nurses in much the same way as a ship's captain treated his crew a hundred years ago, a way in which no ship's captain would venture to treat his crew in these days. The pre-Listerian surgeons—men like Paget, Ferguson, Savory, Hutchinson, Timothy Holmes, Henry Smith, and their colleagues—had to deal with nurses who were scarcely, if at all, above the servant class; and these surgeons treated their nurses with the courtesy with which well-bred gentlemen treat their servants. The present writer, who has witnessed innumerable

operations by these great surgeons, never heard so much as an expression of impatience from any one of them towards any of their assistants—anæsthetist, dresser, or nurse. They were gentlemen, and they did not assume that the performance of an operation entitled them to cease to be gentlemen.

There are now surgeons, some of them leading men in large practice and in the highest rank of their profession, who do assume this license. They are either so agitated by the performance of an operation that they lose all self-control; or their gentlemanly feeling is so skin-deep that the slightest breeze of emotion sweeps it all away, and leaves the native boor uncloaked; or they become so inflated with self-importance that they consider the ordinary obligations of courtesy no longer apply to them.

Whatever the explanation, it is notorious that there are surgeons who never address their nurses during an operation without an oath, and rarely address a nurse at any time without a profusion of expletives. Nor is it only in their language that they treat their nurses with contumely and insolence. The following instance appears incredible, and we should not believe it were it not that we have it on the independent words of different nurses, in different employment, entirely unconnected with one another and unknown to each other. A well-known surgeon after an operation was approached by a nurse with a basin of water to wash his hands. The water was not, it appears, of exactly the correct temperature to satisfy the surgeon. It was a trifle too hot or too cool, and therefore he expressed his disapprobation by tilting up the basin towards the nurse, and emptying the whole of its contents over her person. She was drenched to the skin, and had to change her clothing, and, what was of importance to her slender purse, to pay for the washing and ironing of her dress and apron. In our opinion, she would have been justified in breaking the basin on his head, but the poor girl had her living to get, and could not afford to show her resentment. We do not know whether this is a regular or habitual practice on the part of the surgeon in question, but it has been related to us as having occurred more than once, and to different nurses; and the curious part of it is that the surgeon by whom this was done is said to be opposed to the forcible feeding of suffragettes.—*The Hospital.*

Questions and Answers.

The following answers are not "official." They are prepared for the Editor.

Vermont Board of Registration of Nurses

ANATOMY AND PHYSIOLOGY.

Examination at Montpelier, Vt., November 13, 1913.

Number each answer and letter each subdivision. Do not write the questions.—*Dr. Gale.*

1. Describe the vascular system of the human body, naming principal organs and tissues.

Ans. The vessels, called arteries, capillaries and veins, are tubes containing the blood; they consist of a thin lining of endothelium, and walls made up of white fibrous connective tissue, yellow elastic connective tissue, and unstriated muscle. The heart is a hollow organ of four cavities; it propels the blood through the vessels; it is made up principally of cardiac muscle tissue, with some connective tissue, and covered inside and outside with endothelium.

2. Describe the mechanism of Respiration, naming organs and tissues involved.

Ans. The nose, pharynx, larynx, trachea, bronchi and lungs make up their respiratory tract. The diaphragm and muscles of the thorax are the muscles of respiration. The tissues involved are epithelium—columnar, flat and ciliated; muscle—striated and unstriated; connective tissue—fibrous, areolar and elastic; cartilage; bone; blood;

lymph. Inspiration is the reception of air into the lungs and is accomplished by increasing the size of the thoracic cavity in every direction by the simultaneous lowering, or flattening of the diaphragm and the raising of the ribs by the action of the thoracic muscles of inspiration. Expiration is the opposite process and follows the relaxation of the inspiratory muscles, which leads to the falling of the ribs, while the relaxed diaphragm is pushed upward by the elastic pressure of the abdominal walls and viscera. Internal respiration is the name applied to the distribution, through blood and lymph, of oxygen taken from the alveoli of the lungs, and the bringing of carbonic acid gas from the internal tissues to the lungs in the same way.

3. What and where is the pleura? Its function?

Ans. The serous membrane covering the surface of the lungs, and lining the cavity of the thorax. It prevents friction between the lungs and the thorax during respiration, by a serous secretion which lubricates its surface.

4. What is the difference in structure and function of arteries and veins? (a) Name largest artery.

Ans. Arteries carry blood away from the heart, and have usually thicker walls than veins, with predominance of elastic tissue, and muscle. Veins carry blood toward the heart, have thinner walls which are inelastic from the presence of white fibrous connective tissue; they are provided with valves to prevent backing up of the blood. (*a*) Aorta.

5. Describe the digestive apparatus and name accessory digestive organs.

Ans. It is a tube, called the alimentary canal, consisting mainly of involuntary muscle and a lining of mucous membrane, extending from the lips to the anus—about thirty feet—and receiving the ducts from certain glands; its divisions are, mouth, pharynx, œsophagus, stomach, duodenum, jejunum, ilium, cecum, colon and rectum. The accessory organs are: teeth, salivary glands (parotid, submaxillary, sublingual), liver, pancreas and spleen.

6. How does pleura differ from other tissues in the body?

Ans. It contains somewhat more elastic tissue than the pericardium or peritoneum.

7. What and where is the oesophagus? (a) How long is it?

Ans. A muscular tube, lined with mucous membrane and joining the pharynx and stomach; it lies between the trachea and spinal column. (*a*) About nine inches.

8. How long is the alimentary canal of the human body? (a) Give subdivisions of the large intestine. (b) Small intestine.

Ans. About thirty feet. (*a*) Cecum, colon (ascending, transverse and descending), sigmoid flexure and rectum. (b) Duodenum, jejunum, ilium.

9. What is the process of mastication and what is effect of same?

Ans. Biting, crushing and grinding between the surfaces of the teeth, and mixing with saliva. Effect is to comminute the food and soften it, preparatory to the action of the digestive juices of the stomach and intestines.

10. By what avenues are the waste products eliminated from the body?

Ans. Kidneys, lungs, skin, and, to some extent, the intestinal tract.

11. Name special senses. (a) Location of each.

Ans. Touch, in the tactile organs of skin and mucous membranes; smell, in the lining of the upper portion of the nose; sight, in the eye; hearing, in the auditory organ of the internal ear; taste, in the nerve endings of the tongue; temperature sense, in certain nerve endings in the skin and mucous membranes.

12. What is the diaphragm? (a) Where located? (b) Name organs immediately above and below.

Ans. A thin, dome-like muscle, separating the thoracic and abdominal cavities. (*a*) From the ensiform cartilage in front to the second, third and fourth lumbar vertebrae behind. (*b*) Above: lungs and pericardium. Below: liver, stomach, colon, spleen, kidneys.

MEDICAL NURSING AND HYGIENE.

Examination at Montpelier, Vt., November 13, 1913.

Answer 10 *questions* only.—Dr. D. C. Hawley.

1. Describe in detail three methods of taking temperature.

Ans. By mouth: the thermometer is placed under the tongue and well inside the mouth, and patient breathes through the nose, if possible. Care is taken that the patient does not eat or drink for about five minutes preceding. The thermometer is kept in place long enough to get the exact temperature, the time varying according to the instrument used. By rectum: The thermometer is inserted in the rectum so that the mercurial bulb passes above the sphincter, and is kept in place as long as in taking temperature by mouth. This method is not used for some time after giving an enema, and care must be taken that the instrument does not penetrate a fecal mass instead of coming into contact with the rectal mucosa. By axilla: The axilla is wiped until free from perspiration, the thermometer inserted, and the arm crossed firmly over the chest; the time is about twice as long as in taking temperature by mouth.

2. Define the terms toxin and antitoxin.

Ans. A toxin is any poisonous albumin or base of bacterial origin. An antitoxin is any substance developed in the body as a result of the presence of a toxin, and capable of defending the body against the toxin.

3. What is acute nephritis? Name two causes. Outline briefly the treatment.

Ans. Acute inflammation of the kidney. Scarlet fever and diphtheria are causes. Rest in bed, milk diet, sweating, purging, and appropriate diuretics.

4. Define diphtheria. State cause, two frequent complications and treatment.

Ans. An acute, infectious disease caused by the Klebs-Loeffler bacillus and causing a false membrane, or growth of bacteria, which may be on any mucous surface or on the skin; this is attended by fever and constitutional symptoms affecting almost any organ. Bronchopneumonia and nephritis may complicate. Isolation, milk diet, local treatment of nose and throat by antiseptics, and prompt use of antitoxin.

5. Define massage and state four objects or purposes for which it is practised.

Ans. Systematic rubbing, stroking, kneading or striking of any part of the body, for therapeutic effect. To improve the circulation; to remove adhesions; to give tone to the muscles; to hasten absorption of exudates.

6. Draw fever chart illustrating typical case of typhoid fever.

The reader is referred to any good book on medical practice.

7. Name four methods by which disease germs are spread.

Ans. Dust, flies, mosquitoes, contact with infected persons.

8. Of what is air composed? How does it become contaminated and how again purified? Where is the purest air found?

Ans. Nitrogen and oxygen, with negligible amounts of other ingredients. By the presence of injurious gases and vapors in various industries, and especially by breathing and rebreathing, coughing and sneezing. At great altitudes and on bodies of water at a distance from land.

9. (a) Name the essential qualities of potable water. (b) What disease is most commonly attributable to impure water?

Ans. (*a*) It is clear, colorless, odorless, palatable, and contains a minimum of organic and mineral matter. (*b*) Typhoid fever.

10. In nursing acute communicable diseases what precautions would you take to prevent (a) your own infection; (b) carrying the infection to others?

Ans. (*a*) Keep yourself in robust health to maintain a good resistance to infection. Protect yourself by such measures as vac-

cination against smallpox and typhoid, and immunization against diphtheria when necessary. Keep yourself as clean as possible at all times, especially washing your hands frequently while at work. Avoid breathing air contaminated by the sneezing or coughing of the patient. Ventilate the sick room thoroughly, your own room also. Never eat anything in the sick room, or without first washing your hands and face. Keep your teeth clean, and cleanse mouth, nose and throat with mild antiseptics if exposed to infection. If avoidable, do not sleep in room with patient. Wear a special gown for protection when working over the patient. (*b*) Besides observing the above precautions, do not leave the patient's house to exercise or visit, without making a complete change of outer garments, and washing yourself. The best rule is to quarantine yourself as well as the patient.

11. Describe in detail preparation for and method of giving a vaginal douche to a ward patient in bed, including all articles needed, quantity and temperature of the douche, etc.

Ans. Everything used in this procedure should be well sterilized, by boiling when possible. Roll the patient's night dress above her waist, let her lie on her back with knees drawn up, and place a douche pan under the buttocks. Cleanse the vulva and thighs with sterile water or antiseptic solution. Pour two quarts of sterile water or solution at a temperature (measured) of 105° to 110° Fahr. into a douche can or fountain syringe provided with sufficient length of rubber tubing leading to a glass douche tip 6 or 8 inches long. After expelling the air and cold water from the douche tip, insert tip gently about six inches into the vagina, separating the labia first so that the tip does not touch anything but the vaginal canal while you are inserting it. Place the douche can not more than two feet above the level of the bed and let the water run slowly. After douching, remove the nozzle from the vagina, and dry the patient with a sterile towel.

12. What is the proper temperature of a patient's room or of a hospital ward, and how would you keep same at average temperature and provide for ventilation?

Ans. About 63° to 68° Fahr., for most cases. There should be an ample supply of heat from radiators, air ducts, or stove, which should not be allowed to run too low; temperature should be observed and recorded on a chart every four hours, unless there is a self-registering thermometer. If there is no ventilating system, windows and doors must be used to supply fresh air and moderate the temperature, taking care to avoid currents directly upon patients.

OBSTETRICAL NURSING.

Examination at Montpelier, Vt., November 13, 1913.

Answer 10 *questions only*:

1. Define ovulation, conception, embryo, extra uterine pregnancy, lactation.

2. Define abortion, miscarriage, premature labor.

3. When during pregnancy does the fundus uteri reach (a) the symphysis pubis; (b) the umbilicus; (c) the ensiform cartilage?

4. (a) What is vertex presentation in labor? (b) What is the normal or first or most common position?

5. Name three micro-organisms which may be the specific cause of puerperal infection.

6. Describe the birth of a baby (a) the power which forces it out; (b) the bony canal through which it passes; (c) the soft

parts it passes; (d) the change in the manner of oxygenation of the blood immediately after birth.

7. Give general rules for feeding a baby, i.e., quantity at each feeding, intervals between feedings, number of feedings in 24 hours and total amount in 24 hours, during first week, second week, sixth week and sixth month.

8. Define and give directions for practising gavage.

9. What is the most frequent cause of digestive disorders in hand fed babies?

10. What is citrated whole milk, and what are some of the advantages claimed for its use?

11. What danger is there in the use of the vacuum bottle (thermos bottle) for keeping infants' food hot?

12. What is the Bacillus lactis Bulgaricus? For what purpose is it sometimes given in connection with the bottle feeding of infants?—*Dr. D. C. Hawley.*

SURGICAL NURSING AND BACTERIOLOGY.

Examination at Montpelier, Vt., November 13, 1913.

1. Give minute directions for preparing your hands for a surgical operation.

2. When is drainage used and why? (a) Name four methods and material that may be employed.

3. How would you care for and prepare a patient during twenty-four hours before an abdominal operation ready for the surgeon?

4. Define the words (a) sterile; (b) asepsis; (c) disinfectants; (d) sterilization; (e) What is most effective?

5. What is an ideal chemical disinfectant? (a) Name four chemical disinfectants.

6. How would you remove a foreign body from the ear? (a) What precautions should be observed?

7. Name four ways to stop hemorrhage? (a) How would you stop hemorrhage in foot or hand?

8. What is normal salt solution? (a) Give formula. (b) When and why used? (c) Describe different ways it is used.

9. What is the difference between fracture and dislocation? (a) Define a compound fracture.

10. Name the germ in a septic wound.

11. Define a burn of first degree. (a) a burn of second degree. (b) a burn of third degree.

12. Give three different kinds of hemorrhage. (a) How distinguished.

Name each answer and letter each subdivision. Do not write the questions.—*Dr. Gale.*

Have your answers to these questions ready for comparison with the answers to be given in a later number of THE GAZETTE.

HIS COLOR SCHEME.

A green little boy, in a green little way,
A little green apple devoured one day;
And the green little grasses now tenderly wave
O'er the little green apple boy's green little grave.

—*Exchange.*

CHANNELOLOGY.

"FATHER, is a vessel a boat?"

"Er—yes—you may call it a boat."

"Well, what kind of a boat is a blood-vessel?"

"It's a lifeboat. Now run away to bed."

—*Ex.*

TECHNICALITIES

Items of value to nurses in their work will be welcome to this column

To Remove Wet Ink Stains.—Rub with a piece of ripe tomato and then rinse well in cold water; wash and boil, or put a little red ink on the mark and wash; the acid dissolves the iron in the ink and sets free the tannin or coloring matter, which will boil out.—*Nursing Times.*

Gets Drunk on Beef Tea.—Liverpool physicians are interested in the case of a travelling salesman who shows every sign of alcoholic poisoning, although he is a teetotaller. His illness is ascribed to the excessive drinking of beef tea and other meat extracts, and the physicians believe that this indicates that nitrogenous stimulants have an effect on the system similar to that of alcohol.—*Od Quarterly.*

A Soap Paste Useful for Purposes of Lubrication.—A. Labat, in *Journal de médecine de Bordeaux* for May 17, 1914, refers to the fact that the lubricant preparations in general use for vaginal and rectal examinations are usually of fatty nature and can be removed from the fingers or gloves only by vigorous brushing with soap and water. The following combination not only possesses the unctuous consistence of petrolatum, but can be removed by merely washing the fingers or gloves with water:

R Saponis pulveris ...3viss (25 grams)
Glycerini .....3xiss (45 grams)
Aquæ destillatæ ...3xviss (61 grams)
M. et ft. pasta.

The soap is dissolved in the mixture of glycerin and water on a water bath. The whole is then poured into a mortar and beaten up for some time until a homogenous paste is obtained. The paste is then kept in sterile containers.—*N. Y. Med. Jour.*

Irritation From Lotions.—Lotions, mildly antiseptic and soothing, occasionally cause irritation, and the cause, or at least one cause, is not far to seek. It is due to the evaporation and concentration of the lotion, so that a lotion of, say, 2 per cent. carbolic acid may become by evaporation 50 per cent. upon the skin, if there be no discharge or other substance to neutralize its caustic action. When, therefore, lotions intended to evaporate are applied frequently, especially on bandages or lint, they should be well diluted, and water should now and then be allowed to take the place of fresh wetting with lotion. This is a point which nurses will do well to remember.—*British Journal of Nursing.*

A Magnetized Needle Holder.—C. M. Stimson, Philadelphia, finds that a magnetized needle holder is quite useful in locating needles or pieces of needles in the course of operations. Such a needle holder may save, therefore, a little time. Any needle holder may be magnetized by placing it on a dynamo for three or four hours. The magnetic properties are not affected by boiling.—*Amer. Journal of Surgery.*

The Real Cornish Pastry.—Miss Tait McKay kindly sends the following recipe asked for by a correspondent: Make a good suet crust, roll out thin in a round shape. Get 1 lb. of beef (lean), six peeled potatoes about the size of an egg. Slice three potatoes and lay across the centre of crust; pepper and salt to taste. Cut the beef into small dice and lay on the top of the potatoes; pepper and salt to taste. Slice the remainder of potatoes, lay on the top of beef; pepper and salt to taste. Gather up the edges of crust and join together on the top by manipulating with the finger and thumb into a crinkled edge almost in the middle, but rather more to one side. This crinkle is considered rather a work of art, and is not so easy to do as it looks.—*Nursing Times.*

The Sugar Test of Water Purity.—It is sometimes useful to be able to obtain an idea of the purity or otherwise of a given water supply without incurring the expense of a full chemical and bacteriological analysis. Among the constituents of sewage are phosphates in comparative abundance. If a clear-glass bottle is nearly filled with the water to be tested, a lump or two of sugar added, and the whole corked tightly and placed in a sunny place for two or three days, the water should remain quite clear. If, however, it contains phosphates in excess, a milkiness will have developed in it, in which case the suspicion of contamination would be sufficiently confirmed to warrant a full analysis of the water supply before any more of it is used for drinking purposes.—*Od Quarterly.*

Raw Beef Tea.—2 oz. raw lean beef, two tablespoonfuls cold water, pinch of salt. Cut the fat and skin from the meat and shred it finely. Put the water in a basin with the salt, add the meat, and leave them to soak for two hours. Strain through a fine strainer and serve in a colored glass. —*Nursing Times.*